

**ON THE JOB — OFF THE JOB
IT'S UP TO YOU TO PREVENT
ACCIDENTS.**

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C. R. URBICK Roseville

SR. ASST. TERMINAL SUPERINTENDENT

E. R. LAW Roseville

ASST. TERMINAL SUPERINTENDENTS

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A. A. WHATLEY Ogden
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D. C. WATERS Stockton
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E. BROWN, T.M. Los Angeles
W. E. MOFFETT, A.T.M. Los Angeles

**Southern Pacific
Transportation Company**



**SACRAMENTO
DIVISION
TIMETABLE**

12

**EFFECTIVE SUNDAY, APRIL 27, 1980
AT 12:01 A.M.**

PACIFIC STANDARD TIME

**FOR THE GOVERNMENT AND INFORMATION
OF EMPLOYEES ONLY**

A. D. DeMOSS,
Vice President-Operations.

R. D. KREBS,
Vice President-Transportation.

C. T. BABERS,
General Manager.

L. G. SIMPSON,
*Assistant Vice President
Operations Planning and Control.*

J. J. WILLIS,
Asst. Vice President-Transportation.

K. A. MOORE,
Superintendent.

**M. L. BURKE,
H. J. KERINS,
D. J. KOLIBABA**
Assistant Superintendents.

SALT LAKE SUBDIVISION

EAST-WARD FIRST CLASS	Mile Post Location	STATIONS SIDING CAPACITIES AND FACILITIES	Station Number	Distance from Ogden	WEST-WARD FIRST CLASS
6 Passenger Leave Daily					5 Passenger Arrive Daily
PM 11.35	534.5	Yd. Lmts. BKYPQ TO-R CARLIN (WP Conn.)	12129	248.6	AM 3.04
	554.3	19.8 WEST ELKO (WP Conn.)		228.8	
AM 12.01	556.2	5430 TO ELKO P	12120	226.9	AM 2.39
	576.7	7000 HALLECK	12112	206.4	2.15
	589.6	4650 DEETH	12109	193.5	
	591.1	1.5 WPRR Connection	12107	192.0	
12.48	603.6	12.5 ALAZON (WP Conn.) CTC DT	12101	179.5	AM 1.52
	607.5	E-6145 W-5080 WELLS PY	10190	175.6	
	616.4	E-6680 MOOR	10185	166.7	
	624.6	9480 HOLBORN CTC	10180	158.5	
	632.5	9700 PEQUOP CTC	10172	150.6	
	640.6	W-9715 VALLEY PASS Double Track	10164	142.5	
	644.8	4.2 COBRE Double Track	10160	138.3	
	661.9	E-8670 Yd. Lmts. 17.1 W-6180 MONTELLO P	10149	121.2	
	679.8	E-5830 W-8130 LUCIN P	10131	102.5	
	685.1	9580 PIGEON	10125	97.2	
	693.7	9630 JACKSON	10116	88.6	
	702.1	9590 LEMAY P	10108	80.2	
	711.1	9650 GROOME Centralized Traffic Control	10099	71.2	
	720.7	9670 HOGUP	10089	61.6	
	729.5	9575 STRONGKNOB	10078	52.8	
	734.6	5.1 LAKESIDE P	10072	47.7	
	739.7	5.1 TRESEND No. 1 Track	10067	42.6	
	745.2	9620 5.5 MIDLAKE No. 2 Track	10061	37.1	
	752.9	13.2 BRIDGE	10053	29.4	
	755.2	2.3 SALINE Double Track	10050	27.1	
	767.2	M-6240 12.0 LITTLE MOUNTAIN	10039	15.1	
	769.7	2.5 UTAH INDUSTRIAL PARK Y	10038	12.6	
	776.3	6.6 WEST WEBER	10037	6.0	
AM 5.00	782.3	Yd. Lmts. 6.0 BKIYPQ TO-R OGDEN	10000	0.0	PM 10.59
Arrive Daily		(247.8 Eastward) (248.6 Westward)			Leave Daily

ADDITIONAL STATIONS			
Capacity and Direction of entry into Spurs	Mile Post	NAME	Station Number
300E	544.7	Moleen.....	12124
..	564.8	Osino..... (Spur)	12118
..	568.4	Ryndon.....	12117
..	573.1	Elburz (W.P. Conn.).....	12116
..	758.5	Promontory Pt.....	10045
Eastward Track			
600E	669.3	Tecoma.....	10142

RULE 5. Ogden. Time applies for No. 5 and No. 6 at Amtrak passenger station and for other trains at yard limit board MP 780.21.

Time shown for eastward first class trains at Carlin and Elko for information only. See Western Pacific Railroad timetable for eastward train movements between Carlin and Alazon.

450

SALT LAKE SUBDIVISION

EAST- WARD	Mile Post Location	STATIONS SIDING CAPACITIES AND FACILITIES	Station Number	Distance from Carlin	WEST- WARD	FIRST CLASS	5
6							
Passenger							
Leave Daily							
PM 7.12	246.2	Yd. Lmts. TO-R SPARKS BKYPQ	16105	288.3	AM 7.46		
	249.1	2.9 VISTA P	16055	285.1	7.30		
	253.1	5990 4.0 HAFED P	16049	281.4			
	257.3	5875 4.2 PATRICK P	16043	277.2			
	262.1	5745 4.8 CLARK P	16035	272.4			
	266.2	9600 4.1 THISBE P	16030	268.3			
	276.1	10100 9.9 FERNLEY YPQ	16020	258.4			
	284.5	9400 8.4 DARWIN P	16010	250.0			
	288.1	6500 3.6 HAZEN P	14160	246.4			
	292.8	6185 4.4 MASSIE	14157	242.0			
	302.0	10200 9.5 UPSAL	14148	232.5			
	311.7	9600 9.7 PARRAN	14137	222.8			
	320.0	9860 8.3 OCALA	14129	214.5			
	328.4	9620 8.4 TOY	14121	206.1			
	336.8	9940 8.4 GRANITE POINT	14110	197.7			
	340.5	3.7 PERTH	14090	194.0			
	344.3	W-6450 3.8 LOVELOCK QP	14082	190.2			
	357.8	E-6075 13.5 OREANA	14067	176.7			
	366.0	M-6200 8.2 RYE PATCH	14059	168.5			
	377.0	11.2 HUMBOLDT	14048	157.3			
	384.1	7.1 IMLAY	14041	150.2			
	388.7	4.6 MILL CITY	14035	145.6			
	397.0	8.3 COSGRAVE	14027	137.3			
	406.6	9.6 ROSE CREEK	14016	127.7			
	406.8						
s 9.49	417.3	6756 10.5 WINNEMUCCA PQ	14005	117.2	s 5.04		
9.52	420.9	3.6 WESO (WP Conn.) P	12198	113.6	4.57		
	422.8	1.9 TULE	12194	111.7			
	439.3	16.5 PREBLE	12185	95.2			
	448.1	8.8 IRON POINT	12180	86.4	4.33		
	475.8	6500 27.7 TO BATTLE MOUNTAIN PQ	12162	58.7	4.09		
	492.9	7580 17.1 MOSEL	12156	41.6	3.53		
	508.2	15.3 TO BEOWAWE (WP Conn.) P	12145	26.3	3.40		
	520.3	12.1 BARTH (WP Conn.) P	12137	14.2	3.27		
s 11.30 PM	534.5	Yd. Lmts. TO-R CARLIN (WP Conn.) BKYPQ	12129	0.0	3.09 AM		
Arrive Daily		(288.3)					
6					5		

EAST- WARD	Mile Post Location	STATIONS SIDING CAPACITIES AND FACILITIES	Station Number	Distance	WEST- WARD
	358.7	Yd. Lmts. TO-R WENDEL BKYPQ	08398	22.3	
	349.8	8.9 HERLONG	08510	13.4	
	336.4	13.4 FLANIGAN P	08540	0.0	

Oregon Division stations Herlong and Wendel, shown for information only.

Mina Branch				
288.1	Yd. Lmts.	HAZEN P	14160	128.9
307.0	3070	18.9 APIAN	14320	110.0
328.0	4025	21.0 WABUSKA P	14341	89.0
354.2	3130	26.2 SCHURZ P	14367	62.8
384.4	2200 TO	30.2 THORNE P	14370	32.6
408.2		23.8 LUNING P	14380	8.8
417.0	Yd. Lmts. TO-R	8.8 MINA BKYPQ	14395	0.0

Fallon Branch				
288.1	Yd. Lmts. R	HAZEN P	14160	15.8
303.9		15.8 FALLON Y	14210	0.0

ADDITIONAL STATIONS				
Capacity and Direction of entry into Spurs	Mile Post	NAME	Station Number	
1715W P	260.2	Wunotoo (Spur)	16038	
.. ..	348.7	Kodak	14077	
4210		Colado		
2550E } P	350.1	" ..	14075	
980W		" ..		
1825W		" ..		
1640E ..	434.0	Golconda (Spur)	12189	
245E ..	461.3	Valmy	12175	
7550W ..	466.3	Mote	12171	
3185E ..	487.7	Argenta	12159	
245E ..	517.0	Harney	12141	
2790E P	525.7	Palisade	12134	

Mina Branch				
615	..	313.8	Weeks	14327
2630	..	330.8	Fort Churchill ..	14343
..	..	331.9	Lux	14345
..	..	347.7	Reservation	14361

Time shown for eastward first class trains at Weso and Carlin for information only. See Western Pacific Railroad timetable for eastward train movements between Weso and Carlin.

ROSEVILLE SUBDIVISION

EASTWARD			No. 2 Track		Distance from Sacramento
FIRST CLASS	Mile Post Location	Station Number	STATIONS		
6			SIDING CAPACITIES AND FACILITIES		
Passenger					
Leave Daily					
PM 2.27	89.0 88.9	23050	R SACRAMENTO BKIYPQ		0.0
	90.0	23040	1.1 SACRAMENTO (15th St.) P		1.1
	91.8	23037	1.8 ELVAS KIYPQ		2.9
	94.9	23021	3.1 BENALI P		6.0
2.45	102.8	23008	7.9 ANTELOPE BKIPQ		13.9
2.52	106.6	23000	3.8 TO-R ROSEVILLE BKIYPQ		17.7
	110.6	16480	4.0 ROCKKLIN P		21.7
3.08	120.2	16450	9.6 NEWCASTLE P		31.3
3.13	124.2	16440	4.0 AUBURN, NEVADA ST. P		35.3
3.19	129.1	16425	4.9 E-4200 BOWMAN P		40.2
s 3.37	141.7	16300	12.6 TO E-6400 Yd. Lmts. COLFAX BKYPQ		52.8
3.46	146.1 146.0	16270	4.4 CAPE HORN P		57.2
3.58	152.2	16259	6.2 E-6400 GOLD RUN P		63.4
4.15	160.7	16242	8.5 MIDAS P		71.9
4.25	165.5 166.6	16234	4.8 BLUE CANON P		76.7
4.35	171.4	16229	4.8 M-5400 EMIGRANT GAP IYPQ		81.5
	179.0	16220	7.6 SHED 10 IP		89.1
	180.3	16217	1.3 CISCO P		90.4
	185.5	16211	5.2 TROY P		95.6
	192.0	16190	6.5 E-6336 TO NORDEN BKIYPQ		102.1
	197.3 198.7	16175	5.3 SHED 47 IP		107.4
s 5.46	208.0	16160	9.3 E-4850 Yd. Lmts. TRUCKEE BKIYPQ		116.7
6.07	222.4	16148	14.4 FLORISTON P		131.1
6.19	231.8	16133	9.4 VERDI P		140.5
s 6.43	242.9	16110	11.1 RENO P		151.6
s 6.52 PM	246.2	16105	3.3 TO-R SPARKS BKYPQ		154.9
Arrive Daily			(154.9)		

WESTWARD			No. 1 Track		Distance from Sparks
FIRST CLASS	Mile Post Location	Station Number	STATIONS		
5			SIDING CAPACITIES AND FACILITIES		
Passenger					
Arrive Daily					
PM 1.17			R SACRAMENTO BKIYPQ		23050
			1.1 SACRAMENTO (15th St.) P		23040
			1.8 ELVAS KIYPQ		23037
			3.1 W-4860 BENALI P		23021
12.46			7.9 TO ANTELOPE BKIPQ		23008
12.40			3.8 TO-R ROSEVILLE BKIYPQ		23000
			4.0 ROCKKLIN P		16480
			3.3 W-6032 LOOMIS P		16370
			2.7 PENRYN P		16360
12.19			3.0 NEWCASTLE P		16350
			4.9 AUBURN P		16340
12.01 PM			3.9 BOWMAN P		16330
AM 11.38			13.7 TO W-5000 Yd. Lmts. COLFAX BKYPQ		16300
			4.3 CAPE HORN P		16270
11.20			6.2 GOLD RUN P		16259
11.07			8.5 MIDAS P		16242
10.49			4.9 BLUE CANON P		16234
10.39			4.7 M-5400 EMIGRANT GAP IYPQ		16229
10.29			7.6 SHED 10 IP		16220
			1.3 CISCO P		16217
			5.3 TROY P		16211
			6.5 TO NORDEN BKIYPQ		16190
			6.6 SHED 47 IP		16175
9.13			9.3 W-6023 Yd. Lmts. TRUCKEE BKIYPQ		16160
8.48			14.3 FLORISTON P		16148
8.35			9.2 VERDI P		16133
8.19 AM			11.2 RENO P		16110
8.06 AM			3.3 TO-R SPARKS BKYPQ		16105
Leave Daily			(156.4)		

Capacity and Direction of entry into Spurs	Mile Post	NAME	Station Number
Sacramento-Sparks No. 2 Track			
3750	P 93.5	Swanston	23028
3885W	P 97.5	Planehaven	23015
710W	P 99.4	Walerga	23012
540W	P 126.5	Foothill	16430
..	P 148.5	Magra	16265
..	P 156.8	Towle	16247
..	P 157.3	Baxter	16172
..	.. 177.9	Crystal Lake	16221
..	.. 197.7	Eder	16176
..	.. 200.9	Andover	16172
..	P 216.3	Boca	16154
..	P 238.0	Lawton	16125
..	P 241.0	West Reno	16122

Capacity and Direction of entry into Spurs	Mile Post	NAME	Station Number
Sparks-Sacramento No. 1 Track			
490E	.. 241.0	West Reno	16122
1125E	P 238.0	Lawton	16125
835W	P 216.2	Boca	16154
..	.. 200.9	Andover	16172
..	.. 197.7	Eder	16176
880E	P 193.4	Summit	16181
..	.. 177.9	Crystal Lake	16221
880E	P 157.2	Towle	16247
..	P 148.9	Magra	16265
1850W	P 97.5	Planehaven	23015
9083E	P 92.9	Johnston	23032

RULE 5: Time applies at station signs between Sparks and Sacramento.

STOCKTON SUBDIVISION

WEST-WARD	East Side Line		Station Number	EAST-WARD		
Mile Post Location	STATIONS SIDING CAPACITIES AND FACILITIES			Distance		
136.2	Yard Limits W-4350	ELVAS K1YPQ	Dbl. Trk.	23037	64.7	
133.2		7400 BRIGHTON IP		23110	61.7	
132.0		1.2 POLK IP		23113	60.5	
129.0		3.0 FLORIN P	Centralized Traffic Control	26014	57.5	
122.9	8350 6.1 ELK GROVE P	26022		51.4		
115.5	8350 7.4 NEED P	26032		44.0		
111.7	R 3.8 GALT P	26038		40.2		
106.2	8350 5.5 ACAMPO P	26211		34.7		
103.3	6070 2.9 LODI BKYPQ	26220		31.8		
93.9	No 1 Track	9.4 AKERS P		No. 2 Track	26415	22.4
92.7		1.2 EL PINAL P			26417	21.2
90.9	Yd. Lmts. R 1.8 STOCKTON BK1YPQ	26420		DT	19.4	
81.5	W-3870 9.4 LATHROP YP	26620			10.0	

EAST-WARD	(84.7)		WEST-WARD	
71.5	Yd. Lmts. TO-R	TRACY BK1YPQ	25300	0.0
81.5	W-3870	10.0 LATHROP YP	26620	0.0

EAST-WARD	(108.9)		WEST-WARD	
81.5		LATHROP YP	26620	108.9
92.9	8350 6.5	CALLA YP	26723	102.4
99.4	8350 8.6	COVELL P	26739	93.8
108.0		5.1 MODESTO BKPKQ	26750	88.7
113.1	8350 4.3	CERES P	26775	84.4
117.4		8.8 TURLOCK PQ	26790	75.6
126.2	8350 3.4	ALCANT P	26805	72.2
129.6	8350 10.2	ARENA P	26822	62.0
139.8	8350 7.6	FERGUS P	26834	54.4
147.4		3.1 MERCED BPQ	26840	51.3
150.5	8350 6.1	LINGARD P	26867	45.2
156.6	8300 11.6	CHOWCHILLA P	27005	33.6
168.2	8410 11.0	NOTARB P	27019	22.6
179.2		4.7 MADERA PQ	27025	17.9
183.9	8350 6.3	IRRIGOSA P	27033	11.6
190.2	10090 9.0	BIOLA JCT. P	27300	2.6
199.2	Yd. Lmts. TO-R	FRESNO YARD BKYPQ	27325	0.0

Placerville Branch		Station Number	Distance
94.7	Yd. Lmts. BRIGHTON IP	23110	55.0
96.4	1.7 PERKINS	23117	53.3
104.4	8.0 CITRUS	23131	45.3
111.1	6.7 FOLSOM JCT. Y	23143	38.6
149.7	Yd. Lmts. 4.7 PLACERVILLE	23190	0.0

EAST-WARD	STATIONS SIDING CAPACITIES AND FACILITIES		Station Number	WEST-WARD
	Oakdale Branch			
90.9	Yd. Lmts. R	STOCKTON BK1YPQ	26420	33.5
122.4	2450	31.5 OAKDALE P	26550	3.9
124.4		2.0 END OF BRANCH		0.0

Kentucky House Branch		Station Number	Distance	
103.5	Yd. Lmts. R	LODI BKYPQ	26220	39.1
107.1	R	3.6 VICTOR	26309	35.5
142.6		35.5 KENTUCKY HOUSE	26355	0.0

Woodbridge Branch		Station Number	Distance	
103.4	Yd. Lmts. R	LODI BKYPQ	26220	2.4
105.8	R	2.4 WOODBRIDGE	26230	0.0

Ione Branch		Station Number	Distance	
111.7	R	GALT P	26038	27.1
138.8	1370	27.1 IONE	26140	0.0

Capacity and Direction of entry into Spurs	Mile Post	NAME	Station Number
1510E	P	Urgon..... (Spur)	26213
290E	P	Toonspur..... (Spur)	26408
980W	..	Castle..... (Spur)	26411
1710	P	French Camp.....	26610
8250	P	Manteca.....	26720
3250	P	Ripon.....	26729
..	..	106.4 Salida.....	26734
12100	P	110.9 West Modesto.....	26745
290W	..	120.8 Keyes..... (Spur)	26779
980W	..	131.9 Delhi..... (Spur)	26810
5800E	P	136.4 Livingston..... (Spur)	26815
3800	P	143.2 Atwater.....	26829
..	..	151.9 Creegan.....	26861
..	P	160.5 Athlone.....	26872
2450	P	176.5 Berenda.....	27015
1220W	P	186.7 Borden..... (Spur)	27039
Oakdale Branch			
..	..	98.3 Walthall.....	26513
..	..	103.8 Peters.....	26521
880W	..	120.6 Adela..... (Spur)	26542
Kentucky House Branch			
..	..	105.2 Brandywine.....	26305
880	..	110.7 Lockeford.....	26314
..	..	114.7 Clements.....	26321
840	..	130.2 Valley Spring.....	26339
530	..	134.7 Toyon.....	26345
Ione Branch			
930	..	122.0 Clay.....	26112
4800E	..	124.2 Rancho Seco.. (Spur)	26114
1860	..	132.3 Carbondale.....	26124
1070	..	134.4 Indian Hill.....	26127
1870W	..	134.8 Edwin..... (Spur)	26129
680W	..	137.7 Dagon..... (Spur)	26137
Placerville Branch			
1520W	..	97.5 Manlove..... (Spur)	23119
550	..	98.9 Mayhew.....	23122
1210	..	101.6 Mills.....	23127
635W	..	107.4 Nimbus..... (Spur)	23138
..	..	110.1 Natoma.....	23141
..	..	118.0 White Rock.....	23158
..	..	131.4 Dugan.....	23175
735	..	131.7 Bullard.....	23177
..	..	142.7 El Dorado.....	23184
850	..	145.0 Diamond Springs.....	23186

6 STOCKTON SUBDIVISION

Mile Post Location	STATIONS SIDING CAPACITIES AND FACILITIES	Station Number	WEST-WARD			
			Distance			
71.5 82.9	Automatic Block Signal System					
84.9				TO-R TRACY BKIYPQ	25300	126.4
100.4				Yd. Lmts. 2.0 LYOTH IP	25310	124.4
107.4				5040 Yd. Lmts. 15.5 WESTLEY P	25343	108.9
119.5				2540 Yd. Lmts. 7.0 PATTERSON P	25352	101.9
123.5				2690 Yd. Lmts. 12.1 NEWMAN PQ	25368	89.8
140.4				2450 Yd. Lmts. 4.0 GUSTINE P	25373	85.8
153.0				4500 Yd. Lmts. 16.9 LOS BANOS P	25395	68.9
166.2				2100 Yd. Lmts. 12.6 DOS PALOS P	25410	56.3
174.5				Yd. Lmts. 13.2 5040 FIREBAUGH P	25426	43.1
181.9				Yd. Lmts. 8.3 4360 TO MENDOTA YPQ	25440	34.8
193.0				1910 Yd. Lmts. 7.4 R INGLE P	27100	27.4
202.5				Yd. Lmts. 11.1 R KERMAN P	27220	16.3
209.3 201.8				Yd. Lmts. 9.5 R PRATTON P	27236	6.8
				Yd. Lmts. 6.8 TO-R FRESNO YARD BKYPQ J.D.	27325	0.0
(126.4)						
Biola Branch						
208.6				Yd. Lmts. R BIOLA JCT. P	27300	0.0
200.5	BIOLA	27315	8.1			
(8.1)						
Riverdale Branch						
181.9	Yd. Lmts. R 1910 INGLE P	27100	26.9			
199.0	17.1 HELM	27122	9.7			
206.2	7.2 BURRELL	27131	2.5			
208.7	2.5 END OF BRANCH		0.0			
(26.9)						

ADDITIONAL STATIONS			
Capacity & Direction of entry into spurs	Mile Post	NAME	Station Number
450E ..	92.6	Vernalis.....	25336
490E P	94.9	Solyo.....	25338
2450 Yd. Lmts. P	113.2	Crows Landing.....	25359
980 ..	129.3	Ingomar.....	25379
490E Yd. Lmts. P	135.6	Volta.....	25387
290E P	159.8	Oxalis.....	25419
390W P	169.0	Benito.....	25431
1960 Yd. Lmts. P	170.8	Cromir.....	25435
830 P	205.3	Crayold.....	27240
Biola Branch			
190E ..	208.2	Rayland..... (Spur)	27306
190W ..	202.5	Raco..... (Spur)	27312
Riverdale Branch			
580 ..	187.2	Tranquility.....	27107
1560 ..	191.7	San Joaquin.....	27114

VALLEY SUBDIVISION

Mile Post Location	STATIONS SIDING CAPACITIES AND FACILITIES	Station Number	WEST-WARD
			Distance
108.3	5360 R HARRINGTON P	21305	25.2
120.8	12.5 GRIMES	21171	12.7
133.0	12.2 COLUSA	21156	0.5
133.5	0.5 END OF BRANCH		0.0
(25.2)			
Hamilton Branch			
180.4	1535 Yd. Lmts. R WYO YP	21030	11.4
170.0	10.4 HAMILTON	21113	1.0
169.0	1.0 END OF BRANCH		0.0
(11.4)			
Knights Landing Branch			
84.9	Yard Limits 4895 TO-R WOODLAND BKYPQ	21340	3.3
87.7	2.8 SUGARFIELD	21404	2.2
88.2	0.5 END OF BRANCH		0.0
(3.3)			
Matheson Branch			
258.2	Yd. Lmts. R REDDING BKYPQ	20110	10.7
261.0	2.8 MIDDLE CREEK	20120	7.9
263.2	2.2 KETT	20125	5.7
268.9	5.7 MATHESON	20130	0.0
(10.7)			
Stirling City Branch			
184.2	CHICO BKYPQ	22030	4.8
188.3	4.1 BUTTE CREEK	22105	0.7
189.0	0.7 END OF BRANCH		0.0
(4.8)			
Yuba City Branch			
144.7 144.4	Yard Limits 8450 BERG P	22249	3.84
147.6	3.2 YUBA CITY	22304	0.64
148.2	0.64 END OF BRANCH		
(3.84)			
Oroville Branch			
Via WPRR See WP Timetable Special Instructions and Rules for movement between Binney Jct. and Oroville.			
122.7	BINNEY JCT. P	22404	25.2
147.4	25.2 (Via WPRR) OROVILLE	22420	0.0
(25.2)			

ADDITIONAL STATIONS			
Capacity and Direction of entry into Spurs	Mile Post	NAME	Station Number
1960	178.6	Hamilton Branch Cory.....	21103

VALLEY SUBDIVISION

EAST-WARD FIRST CLASS 14 Passenger Leave Daily	Mile Post Location	West Valley Line			WEST-WARD FIRST CLASS 11 Passenger Arrive Daily
		STATIONS SIDING CAPACITIES AND FACILITIES	Station Number	Distance from Dunsmuir	
PM 10.36	75.6	N-3351 Yd. Lmts. TO-R DAVIS KIYPQ	23323	214.0	AM 6.42
10.42	80.7	4985 5.1 MERRITT	21510	208.9	6.30
10.46	84.9	Yd. Lmts. TO-R WOODLAND BKPQ	21340	204.7	6.26
	89.9	1910 5.0 YOLO	21330	199.7	
10.57	95.8	5235 5.9 ZAMORA P	21320	193.8	6.15
11.09	108.3	5360 12.5 HARRINGTON P	21305	181.3	6.08
11.25	124.2	R 15.7 WILLIAMS P	21255	165.6	5.49
11.30	129.1	5065 4.9 CORTENA P	21248	160.7	5.44
11.39	138.3	5015 9.2 DELANAV P	21237	151.5	5.35
PM 11.51	149.9	5495 Yd. Lmts. 11.6 WILLOWS P	21222	139.9	5.23
AM 12.09	165.4	Yd. Lmts. 15.5 ORLAND P	21204	124.4	s 5.06
12.11	167.0	R 1535 1.6 WYO YP	21030	122.8	5.01
12.23	178.5	2015 11.5 CORNING P	21025	111.3	4.49
12.31	186.3	7.8 TEHAMA YP	20195	103.5	4.42
	213.8	2.1 GERBER P	20190	101.4	
	218.9	8305 5.1 RAWSON P	20178	96.3	
	223.4	TO-R 4.5 RED BLUFF BKPQ	20173	91.8	
	228.9	8345 5.5 BLUNT P	20165	86.3	
	236.5	8200 7.6 DRAPER P	20160	78.7	
	244.2	8445 7.7 CULP P	20152	71.0	
	253.5	9245 9.3 GIRVAN P	20140	61.7	
s 1.17	258.2	10820 TO-R 4.7 REDDING BKPQ	20110	57.0	s 3.52
	263.0	5290 4.8 SILVERTHORN P	20067	52.2	
	266.3	5095 3.3 CENTRAL VALLEY P	20063	48.9	
	270.4	9350 4.1 GRAY ROCKS P	20058	44.8	
	277.6	6120 7.2 OBRIEN P	20055	37.6	
	281.2	5095 3.6 MEAD P	20051	34.0	
	285.7	8300 4.5 LAKEHEAD YP	20045	29.5	
289.8	296.7	5255 4.1 DELTA P	20033	25.4	
	300.2	5570 3.5 LAMOINE P	20029	21.9	
	304.0	4970 3.8 GIBSON P	20025	18.1	
	309.4	8300 5.4 SIMS P	20019	12.7	
	313.1	5385 3.7 CONANT P	20014	9.0	
	318.3	5805 5.2 CASTLE CRAG P	20005	3.8	
	321.2	8501 2.9 DUNSMUIR YARD P	07255	0.9	
s 3.09 AM	322.1	TO 0.9 DUNSMUIR BKYPQ	07250	0.0	2.04 AM
Arrive Daily		(214.0)			Leave Daily
14					11

EAST-WARD Mile Post Location	East Valley Line		WEST-WARD Station Number	Distance
	STATIONS SIDING CAPACITIES AND FACILITIES	Station Number		
106.6	TO-R ROSEVILLE BKIYPQ	23000	105.1	
112.8	8370 SUNSET-6.2 P WHITNEY RANCH	22579	98.9	
117.0	4.2 LINCOLN P	22574	94.7	
122.1	8260 5.1 BROCK P	22567	89.6	
134.2	8350 12.1 OSTROM P	22547	77.5	
139.8	5.6 DANTONI JCT. P	22531	71.9	
140.8	R 1.0 MARYSVILLE BKYPQ	22500	70.9	
141.8	1.0 BINNEY JCT. P	22404	69.9	
144.7	8450 2.9 BERG P	22249	67.0	
155.9	8420 11.2 FAGAN P	22235	55.8	
158.0	2.1 GRIDLEY P	22232	53.7	
167.4	8185 9.4 RICHVALE P	22220	44.3	
178.1	10.7 DURHAM P	22207	33.6	
184.2	8540 6.1 CHICO BKYPQ	22030	27.5	
193.6	8378 9.4 ANITA P	22019	18.1	
203.0	8200 9.4 VINA P	22011	8.7	
211.7	8.7 TEHAMA YP	20195	0.0	
	(105.1)			

ADDITIONAL STATIONS			
Capacity and Direction of entry into Spurs	Mile Post	NAME	Station Number
West Valley Line			
1175W ..	92.1	Dufour (Spur)	21325
835W P ..	103.2	Dunnigan (Spur)	21312
1125E ..	106.4	Hershey (Spur)	21308
1470E ..	113.5	Arbuckle (Spur)	21266
1470E ..	117.6	Geneva (Spur)	21261
..	126.8	Delphos	21251
1370E ..	133.0	Maxwell (Spur)	21243
3235E ..	156.8	Artois (Spur)	21214
..	162.0	Greenwood	21208
390E ..	181.6	Richfield (Spur)	21020
..	215.8	Proberta	20182
..	224.5	Glade	20170
1960 ..	240.4	Cottonwood	20157
2645 ..	247.1	Anderson	20148
East Valley Line			
2450 P ..	118.4	Clayton	22572
2745 ..	121.0	Ewing	22569
.. P ..	131.2	Erle	22551
..	138.9	Rupert	22541
685E ..	149.8	Sunset (Spur)	22242
.. P ..	151.5	Live Oak	22239
2400 P ..	161.4	Biggs	22228
..	191.3	Nord	22023
1370 ..	209.7	Los Molinos	22003

RULE 5. Davis: Time applies at station sign except time applies for No. 14 at east switch north siding.
Tehama: Time applies at junction switch.

DEFINITIONS

Holidays:

New Year's Day, January 1,
 Washington's Birthday, third Monday in February,
 Decoration Day, last Monday in May,
 Independence Day, July 4,
 Labor Day, first Monday in September,
 Veteran's Day, November 11,
 Thanksgiving Day, fourth Thursday in November,
 Christmas Day, December 25.

RULE A. Current Rules and Regulations of the Transportation Department were effective October 31, 1976.

Page 3 of current Rules and Regulations of the Transportation Department has been reprinted listing 21 additional page revisions effective June 1, 1978. Each employe whose duties are prescribed by these Rules is required to have revised page 3, along with all other revised pages listed inserted in proper numerical order in his/her book of rules.

RULE C. First paragraph will not become effective until further notice.

RULE 1. Employe charged with the duty of maintaining standard clock with correct time may obtain standard time by telephone from San Francisco extension 22462.

RULE 3. Trainmen, enginemen, train order and/or interlocking operators who go on duty at locations where there is no standard clock may obtain standard time by telephone from San Francisco extension 22462.

RULE S-72. Westward trains are superior to trains of the same class in the opposite direction.

RULES 81-A and 763. Where electric or mechanical switch locks are installed, be governed by instructions posted in telephone booths, on doors or on housings of electric or mechanical switch lock.

RULE 102. Should a passenger train break in two or an emergency application of brakes occur while in motion on grade, head brakeman will immediately go toward rear, close angle cock at opening if train has parted, apply hand brakes, and turn up retaining valves on detached portion. After train is coupled air must be applied from engine before hand brakes and retaining valves are released.

If necessary to leave detached portion on main track, rear truck of detached portion on ascending grade or lead truck of detached portion on descending grade must be blocked or chained in such manner as to derail car should there be an uncontrolled movement.

RULE 103. Except as otherwise provided in this rule or by other Special Instructions or timetable bulletins, a public grade crossing which is blocked by a stopped train, other than a passenger train, must be opened within ten minutes, unless no vehicle or pedestrian is waiting at the crossing. Such a cleared crossing must be left open until it is known that train is ready to depart. When recoupling at public crossings trains shall be moved promptly consistent with safety.

Switching movements over public grade crossings should be avoided whenever reasonably possible. If not reasonably possible, such crossings must be cleared frequently to allow a vehicle or pedestrian to pass and must not be occupied continuously for longer than ten minutes unless no vehicle or pedestrian is waiting at the crossing.

In the event of any uncontrolled blockage involving more than one grade crossing and a peace officer is on the scene, primary consideration shall be given to the clearing of that crossing which, in the peace officer's judgment, will result in minimum delay to vehicular traffic.

Train or yard crew member of a train blocking a public crossing shall immediately take all reasonable steps, consistent with the safe operation of such train, to clear the crossing upon receiving information from a peace officer, member of any fire department, or operator of an emergency vehicle, that emergency circumstances require the clearing of the crossing.

In the event of any uncontrolled blocking not otherwise provided for in this rule, crossing shall be cleared with reasonable dispatch.

RULE 104-D. Running switches will be made only when in the judgment of the conductor it is necessary and with his personal supervision.

RULES 201 and 221-A. Train orders will be issued by authority and over initials of Chief Train Dispatcher C. L. Kennedy and OK'd clearances must bear initials of Chief Train Dispatcher C. L. Kennedy.

RULES 204, 217 and 220-A. Train order forms K, Q, V, X and Y, with group addresses (such as eastward trains; or westward second class and extra trains), may be forwarded and delivered to a train, care of an employe, at a station other than a train-order office, or at a train-order office which is closed, providing above forms of orders are listed in train-order Form G, Example (8). These orders, unless annulled, must be respected. A copy of each train order listed must be forwarded by train-order operator to employes addressed.

EXCEPTION: Train orders must not be forwarded in above manner when sent in care of employe by train.

RULE S-244. At locations where movement of extra trains or engines are authorized by use of train register, all lines of each page of the train register must be used and filled in before turning and starting a new page.

AUTOMATIC BLOCK SIGNAL SYSTEM

RULE 505. Where signal protection is provided for movements from an adjacent track to main track, push buttons and lights are installed in box near each of the two signals, with time-release feature, to clear signals on one track when the control circuit on the other track is occupied.

Train on main track to let train on siding pass may clear signal on siding by pressing button bearing number of signal on siding. Train on siding to let train on main track pass should not pass APPROACH CIRCUIT sign, but when necessary to do so, may clear signal on main track by pressing button bearing number of signal on main track.

Further instructions posted inside push-button box.

LETTER-TYPE INDICATORS

RULE 705. For information concerning letter-type indicators in connection with Hot Box Detectors and their appurtenances refer to Rule 827, All Subdivisions.

GENERAL REGULATIONS

RULE 825. At terminals where instructions require application of hand brakes on freight trains, outgoing crews must not release hand brakes until road engine is coupled, air test completed and blue sign removed.

Many new cars are equipped with truck-mounted brakes. The hand brake is effective on these cars on "B" end only. It will be necessary to check "B" end of these cars to determine if hand brake has been released.

Rail skids are hung on posts at locations listed under subdivisions. When using rail skid it must be placed on rail and leading wheel of first car in descending direction run onto rail skid and hand brakes applied, if brakes are operative, before engine is detached. Train crews picking up cars from these locations must remove rail skid, return to proper location and lock in place where lock is provided.

RULE 827. Engines running light on descending grade without dynamic brake in operation must stop a sufficient length of time to permit wheel heat radiation if there is INDICATION OF OVERHEATING.

When Hot Box Detectors, High and/or Wide Load, Dragging and/or Derailed Equipment Detectors display flashing white light and/or revolving red beacon light prior to the lead wheel of engine passing these locations, train may proceed without stopping for train inspection provided there is radio communication between crew members on the head-end and rear-end of train. Report must be made to train dispatcher promptly.

When trains are stopped by hot box detectors, high and/or wide load, dragging and/or derailed equipment detectors at locations where bridges, trestles, etc. are not provided with walkways train may be moved slowly ahead a sufficient distance to permit inspection.

HIGH AND/OR WIDE LOAD, DRAGGING AND/OR DERAILED EQUIPMENT DETECTORS

Where high and/or wide load, dragging and/or derailed equipment detectors are installed as listed under subdivisions, revolving red beacon will be mounted on hot box detector house, on post or relay case adjacent to detector and will be normally dark. When detector is activated, the revolving red light will be displayed.

Unless otherwise provided revolving red beacon will apply to trains in both directions, and when activated enginemen or trainmen must stop train promptly in accordance with Air Brake Rule 5. Sec. D. and make inspection of train and track, advising train dispatcher of conditions found.

LOOSE WHEEL DETECTORS

If indication is for loose wheel, all wheels and journals must be inspected on car indicated as well as on the car ahead and the car behind.

ROLLER BEARINGS LOOSE OR MISSING CAP SCREWS

During inspection by trainmen, if any roller bearing is found with one cap screw loose or missing and hot box detector has not been activated and check with tempilstick reveals no overheated condition, train may proceed to the next terminal where car must be set out.

Under the same circumstances, when two or more roller bearing cap screws are found loose or missing, train may proceed to the first available track where car must be set out.

HOT BOX DETECTORS

Three basic types of Hot Box Detectors are utilized. Crew members are to be familiar with the types and locations of these detectors.

Hot box detector scanner sites have a white light continuously displayed on track side of instrument house, except when a hot bearing is detected, at which time light will start flashing. Crew members must be alert for the light and, when flashing, conductor and engineer must immediately orally compare observation when means of communication is available.

Absence of white light must be promptly reported to train dispatcher and does not require train inspection.

Hot box detectors will not in all cases detect an overheated bearing during operation of trains at maximum speed when snow is blowing excessively along running gear of train. When in the judgment of conductor or engineer, this condition exists, train will not exceed 30 MPH while passing over scanners. Speed should be reduced sufficiently in advance of scanner location to permit brakes to be released prior to train passing over scanners.

TYPE A. LETTER "H" INDICATOR (RULE 705.) WITH DIGITAL READ-OUT.

When letter "H" is illuminated or it is known hot bearing has been detected by crew member observing the flashing white light at scanner site, train must be brought to immediate stop and inspection made to determine that it is safe to proceed.

Where possible, inspection must be made before passing over switches or structures. After inspection, train must not exceed 15 MPH from point of inspection until stop is made at location of readout locator and be governed by instructions posted inside case.

Member of crew must make a physical count of axles from rear of train to axle indicated by digital readout and when hot bearing is not located then all journals of car indicated by detector as well as five cars on either side of the car involved must be inspected.

Unless entire train has previously been inspected after stopping for detector, all journals of train must be inspected when "H" is illuminated provided any of the following conditions exist:

1. No count shown on readout locator.
2. Red light below readout marked "Locator Out of Service" is illuminated.
3. Digital readout locator displays erroneous indication such as a duplication of numbers.
4. Numbers displayed exceed the number of axles in train.

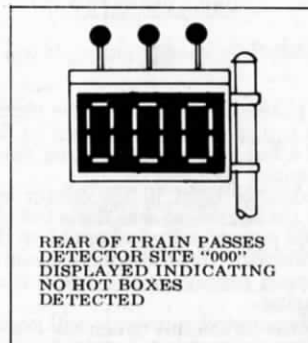
After inspection has been completed train dispatcher must be notified of condition found. When it is safe to proceed, member of crew must push button below indicator panel to cancel numbers on the indicator. Case door must be closed and secured with switch lock.

When letter "W" is displayed it is an indication that preceding train has stopped due to a hot bearing indication but has not cancelled out system. Following trains must stop and not proceed until light is extinguished or permission is obtained from train dispatcher. After stopping, speed of 10 MPH or more should be obtained if possible before passing over detector provided restrictions permit.

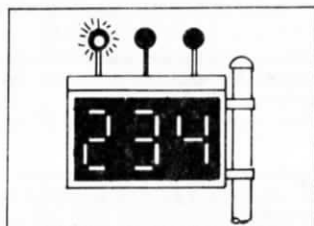
TYPE C. MONITOR DISPLAY BOARD WITH INDICATOR LIGHTS.

A Monitor Display Board and hot box indicator lights, as shown in diagram, are mounted on a signal mast at side of track. The display board is illuminated as train passes and will display zeros in the absence of a hot bearing. Two seconds after the train passes the detector, the display board will display numerals indicating the accumulated axle count from the hot bearing to the rear of the train.

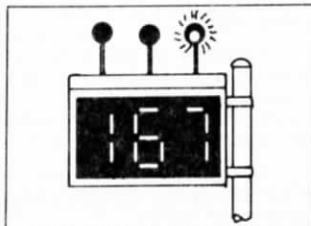
Absence of any numerical display after passage of a train must be promptly reported to train dispatcher.



The indicator lights are normally dark, but when hot bearing is detected, will display flashing white aspect as illustrated below:



ONE HOT BOX ON RIGHT SIDE OF TRAIN IN DIRECTION OF MOVEMENT. AXLE COUNT (234) FROM REAR OF TRAIN. INSPECT ALL BEARINGS OF CAR INDICATED AS WELL AS EACH ADJOINING CAR.



ONE HOT BOX ON LEFT SIDE OF TRAIN IN DIRECTION OF MOVEMENT. AXLE COUNT (167) FROM REAR OF TRAIN. INSPECT ALL BEARINGS OF CAR INDICATED AS WELL AS EACH ADJOINING CAR.



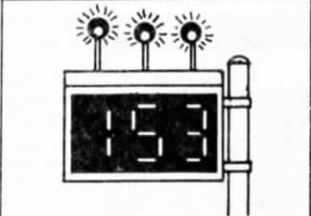
ONE HOT BOX EACH SIDE OF SAME AXLE COUNT (126) FROM REAR OF TRAIN. INSPECT ALL BEARINGS OF CAR INDICATED AS WELL AS EACH ADJOINING CAR.



TWO OR MORE HOT BOXES ON RIGHT SIDE OF TRAIN IN DIRECTION OF MOVEMENT. AXLE COUNT (118) FROM REAR OF TRAIN. INSPECT ALL JOURNALS, REAR OF TRAIN TO AND INCLUDING CAR AHEAD OF AXLE COUNT ON DISPLAY.



TWO OR MORE HOT BOXES ON LEFT SIDE OF TRAIN IN DIRECTION OF MOVEMENT. AXLE COUNT (095) FROM REAR OF TRAIN. INSPECT ALL JOURNALS, REAR OF TRAIN TO AND INCLUDING CAR AHEAD OF AXLE COUNT ON DISPLAY.



ONE OR MORE HOT BOXES ON EACH SIDE OF TRAIN. AXLE COUNT (153) FROM REAR OF TRAIN. INSPECT ALL JOURNALS ON BOTH SIDES, REAR OF TRAIN TO AND INCLUDING CAR AHEAD OF AXLE COUNT ON DISPLAY.

LEGEND

UNILLUMINATED

FLASHING

INDICATOR LAMP



As the train passes the detector, the right or left hot box indicator light on top of the board starts to flash immediately upon detection of a hot journal, indicating the side of the train having the overheated journal.

A flashing indicator light in the center indicates that another hot bearing (or bearings) was detected subsequent to the hot bearing which is numerically indicated on the display board.

When any indicator light displays flashing white aspect, train must be stopped promptly and inspection made to locate car with hot bearing.

Lights and illuminated numerals will automatically cancel out 90 seconds after entire train passes detector.

When hot bearing is not located then all journals of car indicated by detector as well as five cars on either side of the car involved must be inspected.

When it is known hot bearing has been detected by crew member observing the flashing white light displayed on track side of instrument house, and a numerical readout is not displayed on the display board, then train must be stopped promptly and all bearings of train must be inspected.

TYPE D. REMOTE READOUT BY RECORDER AT TERMINAL.

When white light is flashing on instrument house, train must be stopped promptly and when means of communication is available, crew member must contact personnel at location of recorder to determine location of hot bearing. If location of hot bearing cannot be determined by personnel at recorder, inspection must be made of all bearings.

Readout is by recorder located at nearby terminal as shown under Rule 827 on each subdivision.

Terminal personnel at recorder will advise train crew of location of overheated journal, location will be given as number of cars from caboose and location of journals from trailing end of car right or left: 1, 2, 3, 4 such as "R-3."

If lead truck of lead locomotive does not appear on tape, train crew is to be advised to carefully hand feel this truck.

If location of journal is furnished by personnel at recorder, but defect cannot be found, inspect all bearings of indicated car as well as all bearings of five cars on either side.

CHECKING FOR JOURNALS SUSPECTED OF OVERHEATING

Whenever an overheated journal is suspected due to hot box detector activation, rolling inspection or visual symptoms, a walking inspection must be made to find the exact car and journal and to observe for other physical defects on the train.

For roller bearing cars, special attention must be given to proper use of tempilstiks, loose or missing cap screws, temperature sensitive cap screws and loose or leaking seals.

For plain bearing cars, look for low oil; brass, pad or wedge defective or out of place, or water in journal box.

REPORTING OF HOT BOXES

When hot box detectors are actuated the following information is to be reported at next terminal in telegraph message form identified by symbol HB addressed jointly to Superintendent, Regional Engineer, Regional Signal Manager, and Chief Train Dispatcher, also General Manager—Amtrak, San Francisco when an Amtrak passenger train is involved.

1. Date and time stopped and MP location.
2. Train identification.
3. Car number and location in train (whether or not defect found).
4. Box location 1, 2, 3 or 4 from "B" end of car, right or left side.
5. Disposition of car: If set out, state where. If inspection shows that it was not necessary to set out even though bearing was warm enough to activate the detector, advise what corrective action was taken to permit movement of car. If roller bearing equipped, so state.

NOTE: Report all cases where train passes over the detector without an indication having been displayed, but develops a hot bearing between detector and a point 20 miles beyond detector.

Whenever a roller bearing car experiences two hot box detector actuations and overheated journal or other cause of actuation cannot be found after required inspections were made and five cars checked either side, car may be continued in train with provision that conductor must report same at next terminal and inspection is made by qualified maintenance personnel.

Train dispatcher to notify terminal of mandatory inspection when brought to his attention.

If a roller bearing car experiences three hot box detector actuations, it must be set out.

Train dispatcher must:

1. Notify Car Department of cars set out.
2. Notify Car Department of cars which are known to have had two hot box detector actuations.
3. Submit CS-7159A "Preliminary Report of Overheated Journals" whenever hot box is experienced except if on actuation of type "D" yard approach hot box detector.

Connecting crews, if any, must be notified by incoming crew of failure to locate hot bearing if indication is received on any hot box detector system and car is not set out.

CONTINUOUS WELDED RAIL (CWR) TRAINS

Continuous welded rail trains consist of a tiedown car and a number of roller-rack cars and may contain other cars, such as threader cars and elevator cars to accompany movement. A steel-end box car, refrigerator car, or high-side gondola car must be positioned on each end of CWR train as a buffer car during all movements except preparatory to and during unloading.

In addition to other requirements of this rule, when a CWR train is stopped for any reason, inspection must immediately be made of as much of train as practicable and the following items checked if train is carrying a full or partial load:

- a. Check for undesired movement of rail. The tops of rails are painted adjacent to the tiedown rack on the tiedown car which is located near center of train. Paint marks on each tier of rail must be in line; otherwise, this is an indication of an undesired movement of rail.
- b. Check each rail end to make certain it overhangs the last supporting roller by at least 12 feet and is no closer than 12 feet from the next empty roller. Rails are marked 12 feet from each end.
- c. When a load contains continuous lengths of rail made up of more than one piece, check to see that rail joints are secured with at least four bolts, properly tightened, and that rail ends have not pulled apart.
- d. Check coupler operating levers to make certain they are in position to prevent uncoupling and that coupler operating lever locking devices are in position and locked.

When any of these conditions are not as required, train must not be moved until train dispatcher has been contacted and further instructions are received.

HAZARDOUS MATERIALS

RULE 827-A.

Refer to Miscellaneous Item 1. All Subdivisions.

Unless specifically authorized by Superintendent, trains or cuts of cars containing Class A Explosives, Radioactive material or tank cars containing Acrylonitrile, Anhydrous Ammonia, Chlorine, Hydrofluoric Acid, Poison Gas, or Flammable Gas (FG) must not exceed 8,000 feet.

Following are shipping names of Class A Explosives:

Standard Transportation Classification Code	Shipping Name
49 01	Class A Explosives
49 011	Class A explosives, ammunition
49 011 05	Ammunition for cannon with explosive projectiles
49 011 10	Ammunition for cannon with gas projectiles
49 011 15	Ammunition for cannon with illuminating projectiles
49 011 20	Ammunition for cannon with incendiary projectiles
49 011 25	Ammunition for cannon with smoke projectiles
49 011 30	Ammunition for small arms with explosive projectiles
49 011 40	Rocket ammunition with explosive projectiles
49 011 45	Rocket ammunition with gas projectiles
49 011 50	Rocket ammunition with illuminating projectiles
49 011 55	Rocket ammunition with incendiary projectiles
49 011 60	Rocket ammunition with smoke projectiles
49 011 65	Ammunition, chemical, explosive, with poison A material (ammunition, fixed nec, for cannon)

Standard Transportation Classification Code	Shipping Name
49 011 66	Ammunition, chemical, explosive, with poison B material (ammunition, fixed nec, for cannon)
49 011 67	Ammunition, chemical, explosive, with irritant (ammunition, fixed, nec, for cannon)
49 012	Class A explosives, military devices other than ammunition
49 012 05	Fuze, detonating
49 012 10	Fuze, detonating, radioactive
49 012 15	Boosters (explosive) (military)
49 012 20	Bursters (explosive)
49 012 25	Supplementary charges (explosive)
49 012 30	Explosive bomb
49 012 35	Explosive mine
49 012 40	Explosive projectile
49 012 45	Explosive torpedo
49 012 50	Hand grenades
49 012 55	Rifle grenades
49 012 60	Detonating primers
49 013	Class A explosives, commercial devices
49 013 10	Boosters (explosive) (commercial)
49 013 20	Blasting caps (more than 1,000)
49 013 22	Blasting caps with metal clad mild detonating fuse (more than 1,000)
49 013 24	Blasting caps with safety fuse (more than 1,000)
49 013 26	Blasting caps—electric (more than 1,000)
49 013 40	Jet thrust unit (jato) (class A explosive)
49 013 50	Rocket motor (class A explosive)
49 013 60	Igniter, jet thrust (jato) (class A explosive)
49 013 62	Igniter, rocket motor (class A explosive)
49 014	Class A explosives, initiating explosives
49 014 20	Igniting explosive (fulminate of mercury, wet)
49 014	Initiating explosive (diazodinitrophenol)
49 014 35	Initiating explosive (guanyl nitrosamino guanylidene hydrazine)
49 014 40	Initiating explosive (lead azide, dextrinated type only)
49 014 45	Initiating explosive (lead mononitrosorsinate)
49 014 50	Initiating explosive (lead stypnate) (lead trinitrosorsinate)
49 014 55	Initiating explosive (nitro mannite)
49 014 60	Initiating explosive (nitrosoguanidine)
49 014 65	Initiating explosive (pentaerythrite tetranitrate)
49 014 70	Initiating explosive (tetrazene) (guanyl nitrosamino guanyl tetrazene)
49 014	Class A explosives, high explosives
49 015 02	High explosives
49 015 04	High explosives, liquid
49 015 10	High explosives (picric acid, dry)
49 015 20	High explosives (nitrocellulose, dry)
49 015 30	High explosives (nitrostarch, dry)
49 015 40	High explosives (trinitrotoluol, dry)
49 016	Class A explosives, propellant explosives
49 016 02	Propellant explosive
49 016 10	Propellant explosive (gun powder)
49 017	Class A explosives, low explosives
49 007 05	Low explosives
49 107 10	Black powder

Following are shipping names of Radioactive Materials:

Standard Transportation Classification Code	Shipping Name
4926450	Radioactive material, special form
4927220	Radioactive material
4928746	Radioactive material
4929415	Radioactive material, N.O.S. fissile class

Following are shipping names of Poison Gas:

Standard Transportation Classification Code	Shipping Name
49 201 25	Hydrocyanic acid, liquefied
49 201 30	Hydrocyanic acid, solution (5% or more hydrocyanic acid)
49 203 40	Nitrogen dioxide, liquid
49 203 50	Nitrogen peroxide, liquid
49 203 60	Nitrogen tetroxide, liquid
49 203 62	Nitrogen tetroxide-nitric oxide mixture (containing up to 33.2% by weight nitric oxide)

Following are shipping names of Acrylonitrile, Anhydrous Ammonia, Chlorine and Hydrofluoric Acid:

Standard Transportation Classification Code	Shipping Name
4904210	Anhydrous ammonia
4904120	Chlorine
4906810	Acrylonitrile
4930024	Hydrofluoric acid

Following are shipping names of **Flammable Gas**:

Standard Transportation Classification Code	Shipping Name
4905705	Butadiene, inhibited (butadiene from alcohol)
4905704	Butadiene, inhibited (butadiene from petroleum)
4905703	Butadiene, inhibited (butadiene, impure, for further refining)
4905706	Butane
4905706	Liquefied petroleum gas (butane)
4905702	Butane (butane, impure, for further refining)
4905702	Liquefied petroleum gas (butane, impure, for further refining)
4905727	Compressed gases, n.o.s. (despersant gases, nec. flammable)
4905748	Compressed gases, n.o.s. (iso-butene)
4905775	Compressed gases, n.o.s. (refrigerants, nec. liquid, flammable)
4905713	Cyclopropane
4905716	Difluoroethane
4905719	Diffuoromonochloroethane
4905510	Dimethylamine, anhydrous
4905725	Dimethyl ether
4905734	Ethylene
4905749	Hydrocarbon gas, liquefied
4905749	Liquefied hydrocarbon gas
4905746	Hydrogen
4905745	Hydrogen, liquefied
4905410	Hydrogen sulfide
4905747	Isobutane
4905747	Liquefied petroleum gas (isobutane)
4905750	Isobutane (isobutane for further refinery processing)
4905750	Liquefied petroleum gas (isobutane for further refinery processing)
4905752	Liquefied petroleum gas
4905707	Liquefied petroleum gas (butene gas, liquefied)
4905711	Liquefied petroleum gas (butylene, impure for further refining)
4905780	Liquefied petroleum gas (pintsch gas)
4905758	Methylacetylene—propadiene, stabilized
4905761	Methyl chloride
4905764	Methyl chloride—methylene chloride mixture
4905520	Methyl mercaptan
4905530	Monoethylamine, anhydrous
4905781	Propane
4905781	Liquefied petroleum gas (propane)
4905785	Trifluorochloroethylene
4905540	Trimethylamine, anhydrous
4905792	Vinyl chloride
4905795	Vinyl methyl ether, inhibited

When necessary to provide helper engine for trains handling cars containing Class A Explosives, Radioactive material, or tank cars containing Acrylonitrile, Anhydrous Ammonia, Hydrofluoric Acid, Poison Gas or Flammable Gas, helper engine must be placed in accordance with helper service instructions and there must be a proper separation of the helper engine from cars containing these hazardous materials.

RULE 834. Loaded multi-level cars in other than solid trains must be entrained at least four cars behind working locomotives in road movement; also loaded multi-level cars must not be entrained next to hopper, gondola or tank cars loaded with stone, gravel, sand, lime, coal, soda ash, chemicals, etc., subject to wind, vapor, or fume action on adjacent cars, nor placed next to empty cars previously loaded with such commodities. Loaded multi-level cars must not be entrained next to open-top loads of lumber, poles, steel, etc., when lading extends beyond top of car.

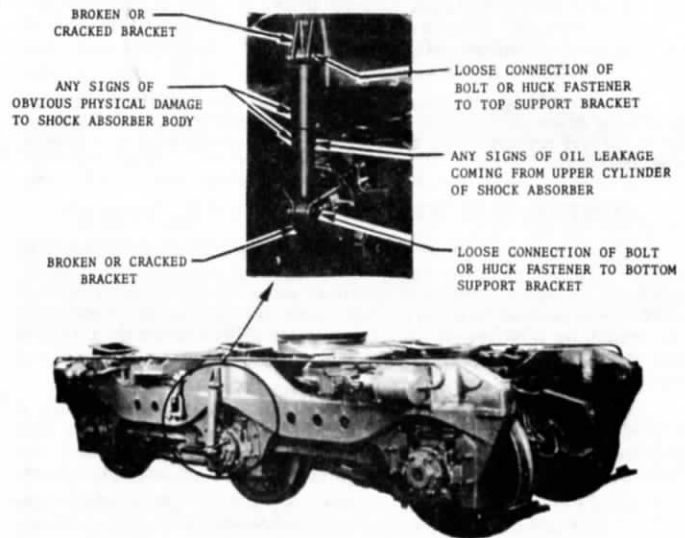
Open-top cars with lading height exceeding 15 feet six inches, except cars transporting highway trucks or trailers, multi-level freight cars either loaded or unloaded, and automobile underframe cars, shall be entrained at least five cars distance from engine or caboose if length of train permits on train operating in or through the States of California, Nevada and Arizona.

Additionally, in California, wood chip cars transporting wood chips when loaded and covered in such a manner so as to preclude any material from being dislodged enroute, are exempted from restrictions above.

RULE 874. Forward brakeman on freight trains will ride the lead unit when a seat is available.

DEFECTIVE CONDITIONS ON HYDRAULIC SHOCK ABSORBERS

Axle Positions 2 and 5 of EMD HTC Trucks



Enginemmen must specifically look for these defects in Shock Absorber when complying with Rule 874, Air Brake Rule 2, Item A, and Air Brake Rule 2.B.

What To Do in Case Defect is Noted:

1. Reduce train speed to not over 50 miles per hour.
2. Notify Dispatcher of defective condition.
3. Enter defect on Form C.S. 2326 for correction.

AIR BRAKE RULES

RULE 3. A full independent brake application on road engine classes EP636, GF628, EF630, EF636, EF642, GF630, GF633, and EF623 results in a brake cylinder pressure of 72 lbs. This brake cylinder pressure must be maintained to provide required braking power at very low speeds or when stopped. Under no circumstances must self-lapping portion of independent brake valve be changed except to obtain brake cylinder pressure of 72 lbs. from a full independent brake application.

RULE 9. The following series of cars are equipped with ABEL brake system which has automatic change-over feature to provide proper brake function when car is loaded and when empty:

SSW 75700-75799	Gondolas
SSW 78500-78599	Hoppers (Open Top)
SP 333500-334399	Gondolas
SP 337500-337599	Gondolas
SP 345000-345669	Gondolas
SP 354000-354749	Gondolas
SP 463500-464899	Hoppers (Open Top)
SP 467500-467549	Hoppers (Open Top)
SP 480000-480193	Hoppers (Open Top)
SP 491000-491059	Hoppers (Covered)
SP 492000-492039	Hoppers (Covered)
SP 500604	Flat Car
SP 590000-590099	Flat Cars

The following series of cars are equipped with ABDEL brake system, which has automatic change-over feature to provide proper brake function when car is loaded and when empty. This feature is fully automatic on these series and requires no action on part of engineer:

SP 337600-337699	Gondolas
SP 354750-355299	Gondolas
SP 463337-463486	Hoppers (Open Top)
SP 464000-465699	Hoppers (Open Top)
SP 590100-590131	Flat Cars (Anode)
SP 595500-595624	Cradle Flats

RULE 17. When dynamic brakes are not used on helper engine(s), tonnage of such engine(s) must be added to that of train in determining the number of retaining valves required.

RULE 21. Coupling caboose and road engine to train will be considered as an indication that train is made up and switchmen have completed their work. Switchmen must not perform switching on or couple other cars to a train on which the road engine and caboose have been attached without instructions from the yardmaster, who will see that members of the crew are notified in advance.

RULE 26. When temperature is 32 degrees or less, running test may be made (Rule 25-A) in lieu of last paragraph of Air Brake Rule 26.

If unable to obtain proper air brake test while running, train must be stopped and air brake hose on head end blown out as prescribed in last paragraph Air Brake Rule 26.

RULE 33. Following trains RVOGP, RVNPP, FRRVP and BKRVP containing not less than 90 percent mechanical refrigerator cars or any restricted cars, not exceeding 120 cars and/or 90 tons per operative brake are authorized to operate at Column 1 speeds not exceeding 60 MPH unless otherwise restricted.

When speed is to be restricted to 45 MPH by Air Brake Rule 33 account tonnage exceeding 80 tons per operative brake, the following trains: UPSFF, UPSFT, LABRT, LABRF, BRLAT, BROAT, OABRT, OAOGF, OGOAT, RGOAT when consisting of not more than 50% multi-level equipment are authorized to operate at maximum speed otherwise allowed but not exceeding speed shown in following table:

Number of cars	TONS PER OPERATIVE BRAKE	
	between 80 and 85	between 85 and 90
1 to 50	60 MPH	60 MPH
51 to 60	60 MPH	60 MPH
61 to 65	60 MPH	55 MPH
65 to 70	60 MPH	.....
71 to 80	50 MPH	.....

In all other cases not covered in the above table Air Brake Rule 33 will apply.

Speed restrictions in grade territories in excess of 1.8% designated by Superintendent under subdivisions must be complied with.

MISCELLANEOUS

1. SPEED RESTRICTIONS FOR TRAINS

Maximum speed of trains in territory shown in speed tables for each Subdivision is subject to further restrictions as shown herein and as shown in Miscellaneous Items 2, 3 and 4 for All Subdivisions.

Trains authorized to operate at Column 1 speeds handling restricted cars or empties, except cabooses, must not exceed 55 MPH.

Trains handling cars containing Class A Explosives, Radioactive materials, or tank cars containing Acrylonitrile, Anhydrous Ammonia, Chlorine, Hydrofluoric Acid, Poison Gas or Flammable Gas (FG) must not exceed speed indicated in following table:

Maximum authorized speed as allowed by Timetable speed table or train order	Maximum allowable speed for trains handling cars contained in any of the above listed commodities
50 MPH or above.....	50 MPH
45 MPH.....	45 MPH
40 MPH.....	30 MPH
35 MPH.....	30 MPH
30 MPH or less.....	No change from authorized speed

Light engines, or engine with caboose, are authorized to operate at Column 1 speeds not exceeding 55 MPH, except on descending grade without dynamic brake in operation must not exceed Column 2 speeds.

When moving against current of traffic, or when movement is not protected by block signals, speed of passenger trains and light engines must not exceed 59 MPH, and speed of freight trains must not exceed 49 MPH, nor may speed exceed that applying to normal operation.

Engines operated with engineer in other than lead unit in direction of movement, must not exceed 20 MPH when approaching highway or street crossing at grade, subject to further restrictions imposed by local conditions.

Unless otherwise authorized, trains handling passenger cars with flat spots on wheels in excess of 3¼ inches in length must not exceed 10 MPH. When flat spots are not in excess of 3¼ inches long such cars may be operated at maximum authorized speeds.

2. SPEED RESTRICTIONS FOR ENGINES: Maximum speed shown below is subject to further restriction applicable to certain territories as shown in Speed Restrictions for Trains:

CLASSIFICATIONS ARE DESCRIPTIVE OF ENGINES AS FOLLOWS:

E F 4 18 A

Denotes Car Body Type with Control Cab;
B = Booster; No Letter = Road Switcher Type.

Denotes Horsepower in Hundreds: 00 = Not Powered;
18 = 1750-1800 HP, etc.

Denotes Number of Axles.

Denotes Service Assignment: F = Freight; M = Misc.;
P = Passenger; S = Switcher.

Denotes Builder: A = Alco; E = EMD; G = GE; S = SPT.

SPECIAL INSTRUCTIONS—ALL SUBDIVISIONS

ENGINE NUMBER	MAX-IMUM SPEED	LENGTH BE-TWEEN PULL-ING FACES	CLAS-SIFICA-TION	MODEL	STARTING TRACTIVE EFFORT
1000-1002	70	70	AS600	SLUG	98,640
1010-1013	65	44	ES400	SLUG	62,800
1100	65	44	ES408	TR 6	51,700
1105-1128	65	44	ES408	SW 8	55,000
1191-1199	65	44	ES409	SW 900	59,180
1204-1277	60	45	AS409	S 6	58,000
1300-1337	65	44	ES410	NW 2	61,600
1400-1506	70	61	ES615	SD 7	82,500
2250-2293	65	44	ES412	SW 1200	62,250
2294-2296	65	44	ES412	SW 7	60,838
2297-2302	65	44	ES412	SW 9	61,800
2303-2304	65	44	ES412	SW 1200	62,250
2305-2306	65	44	ES412	SW 9	61,800
2307	65	44	ES412	SW 1200	62,250
2308	65	44	ES412	SW 9	61,800
2309-2316	65	44	ES412	SW 1200	62,250
2450-2689	65	45	ES415	SW 1500	65,000
2690-2701	65	48	ES415	MP 15AC	65,400
2702-2759	65	49	ES415	MP 15AC	65,400
2868-2899	70	56	ES418	GP 9	64,200
2904-2936	70	57	AS418	RS 11	62,000
2961-2970	70	61	ES620	SD 35	97,540
2971-2976	50	69	ES620	SD 38	102,000
3118-3135	25**	69	AS628	C 628	97,710
3148-3153	25**	69	AS630	C 630	101,110
3186-3196	70	56	EP418	GP 9	64,200
3197-3199	70	63	EP430	GP 40P-2	70,200
3200-3209	70	71	EP636	SDP 45	102,500
3301-3885	70	56	EF418	GP 9	62,500
3901-3964	70	61	EF618	SD 9	89,700
4007	70	57	AS420	RS 32	63,625
4042-4152	70	56	EF420	GP 20	65,100
4200	70	56	EF420	GP 35	66,000
4300-4451	70	61	EF618	SD 9	89,700
4700-4709	70	61	EF620	SD 35	95,540
5000-5017	70	56	EF423	GP 30	66,100
5300-5325	70	66	EF623	SD 39	104,150
6300-6681	70	56	EF425	GP 35	66,000
6800-6801	70	60	GF425	U 25B	67,800
6901-6953	70	61	EF625	SD 35	95,540
7030-7033	70	60	SD428	TE 70	69,750
①7200-7201	70	60	EF435	GP 40X	69,500
②7230-7231	70	60	EF435	GP 40X	69,500
7600-7607	70	59	EF430	GP 40	67,560
7608-7657	70	59	EF430	GP 40-2	69,500
7800-7883	70	59	GF430	B 30-7	69,125
7900-7936	70	67	GF630	U 30C	104,850
③7940-7951	70	59	EF435	GP 40	69,500
#①8300-8341	70	71	EF630	SD 40-2	102,100
#②8350-8391	70	71	EF630	SD 40-2	102,100
8400-8488	70	66	EF630	SD 40	102,750
#8489-8573	70	71	EF630	SD 40-2	102,100
8585-8796	70	67	GF633	U 33C	104,710
8800-9156	70	66	EF636	SD 45	103,470
#9157-9404	70	71	EF636	SD 45-2	102,600
#9500-9502	70	71	EF642	SD 45X	103,240
AMTRAK ENGINES					
*200-328	70	56	EP430A	F 40PH	.....
376-377	70	51	EP415A	F 7	.....
500-649	70	72	EP630A	SDP 40F	.....
700-724	70	72	GP630A	P 30CH	.....
D&RGW ENGINES					
3001-3028	70	56	EF423	.....	.....
3029-3050	70	56	EF425	.....	.....
3051-3128	70	59	EF430	.....	.....
5315-5340	70	66	EF636	.....	.....
5341-5397	50	71	EF630	.....	.....
SN ENGINES					
402	35	45	ES406	SW 1	50,250
607	30	44	ES412	NW 2	62,000
711-712	65	56	EM415	GP 7	61,700

ENGINE NUMBER	MAX-IMUM SPEED	LENGTH BE-TWEEN PULL-ING FACES	CLAS-SIFICA-TION	MODEL	STARTING TRACTIVE EFFORT
UP ENGINES					
1-50	70	66	EF636	SD 45	98,250
2400-2459	70	67	GF630	U 30C	98,250
2800-2809	70	65	GF628	U 28C	93,500
2810-2959	70	67	GF630	U 30C	97,750
3000-3122	70	66	EF630	SD 40	98,250
3123-3488	50	71	EF630	SD 40-2	97,500
#3489-3718	70	71	EF630	SD 40-2	97,500
8000-8074	50	71	EF630	SD 40-2	97,500
#8075-8099	70	71	EF630	SD 40-2	97,500
9000-9005	70	60	EF435	GP 40-X	68,750
WP ENGINES					
601-606	30	44	ES412	SW 9	61,950
607-608	30	44	ES412	NW 2	62,000
701-713	65	56	EM415	GP 7	62,950
725-732	65	56	EM418	GP 9	61,900
913-921	65	51	EF415	F 7	61,175
1501-1503	65	45	ES415	SW 1500	64,700
2001-2010	70	56	EM420	GP 20	64,225
2251-2265	70	60	GF423	U 23 B	65,557
3001-3022	70	56	EF425	GP 35	64,650
3051-3071	70	60	GF430	U 30 B	71,500
3501-3549	70	59	GF430	GP 40	69,250

#Equipped with HTC trucks and truck snubbers. Refer to Rule 874, All Subdivisions.

①RCE Master.

②SP RCE Remote Control Units. These units must not be used as lead unit except on cap hops or light engine consists.

③ Mother.

④ Mate.

*Units 200-229 develop 2300 HP when head end power units is activated.

Units 230-328 develop 1900 HP when head end power unit is activated.

NOTE: Only one head end power unit can be activated in the consist.

**May be handled isolated in multiple, dead in multiple, or dead in train at maximum speed of 70 MPH.

Engines handled dead must not exceed speed shown in table.

When operated in multiple unit control, on head end of train or running light and engineer is in other than the leading control cab in direction of movement, speed must not exceed 30 MPH. 'A' type units (indicated by letter 'A' following classification numerals) operating in reverse as lead unit in direction of movement must not exceed 30 MPH.

Any locomotive not listed in these tables is not to be operated in trains unless authorized by train order indicating maximum permissible speed for locomotive which is then subject to any further restrictions imposed by the timetable or otherwise.

3. MAXIMUM SPEED PERMITTED WITH CERTAIN EQUIPMENT	MPH MAIN TRACKS OTHER THAN BRANCHES	MPH MAIN TRACKS ON BRANCHES
Double or multiple loads	...	25
Scale test cars	40**	30
Except: SPMW 2024, 2025, 5007, 5090, WO-3, WO-4, WO-5	65	49
Relief outfits with steam derrick, except:	45*	25*
Relief outfits 7070 and 7110 must not exceed 35 MPH* and relief outfit 7050 must not exceed 30 MPH* on main tracks other than branches. Relief outfits 7070 and 7110 must not be operated on any branch.		
Relief Outfit SPMW 7150	35*	25*
Rotary snow plows:		
Electrified	35	15
40 ton Locomotive Crane/Pile Drivers SPMW 6603, 6604, 8000		
With boom in place, either end forwardⓐ	25*	15*
With boom disconnected, heavy end forward	40	25
boom end forward	20	15*
With boom disconnected and removable counterweight properly positioned, either end forward	40	25
88-ton Locomotive Crane/Pile Drivers SPMW 8002, 8003, 8004		
With boom in place, either end forwardⓐ	25*	15*
With boom disconnected, heavy end forward	40	25
boom end forward	20*	15*
With boom disconnected and removable counterweight properly positioned, either end forward	40	25
SPMW 4028, 4029, SSW 96405:		
With boom in place, either end forwardⓐ	25*	15*
With boom disconnected, heavy end forward	40	25
boom end forward	20*	15*
With boom disconnected and removable counterweight properly positioned, either end forward	40	25
SPMW 4027 SPMW 5870		
4088 5874		
4091 5899		
5437 6601		
5479 6602		
5595 SSW 96404		
5852 NWPWMW 31		
With boom in place, either end forwardⓐ	25*	15*
With boom disconnected, heavy end forward	45	25
boom end forward	20*	15*
Steam pile driver SPMW 4053	35	25*
Jordan Spreaders:		
Running backward	25	20
Moving forward (prepared for travel)	35	35

*These speeds must not be exceeded, and on curves where authorized speed is more than 15 MPH speed must be reduced to 5 MPH less than shown in timetable and on speed signs.

**Scale Test Car NBS-1 to be handled on trains not more than 20 cars ahead of caboose and speed of train handling NBS-1 not to exceed 60 MPH.

ⓐWhen moving in train with boom in place, operator must be on board.

Unless specifically authorized, all relief outfit cranes and the following locomotive cranes and pile drivers: SPMW 4027, 4028, 4029, 4088, 5479, 5595, 5852, 5870, 5874, 5899, 6601, 6602, 6603, 6604, SSW 96404 and SSW 96405 must not operate over lines having maximum load limits of less than 263,000 lbs. and must observe all restrictions applying to cars weighing over 210,000 lbs.

4. OTHER MAXIMUM SPEEDS	MPH PASSENGER TRAINS	MPH FREIGHT TRAINS
Passenger equipment with caboose	65	..
Trains handling empty bulkhead flat cars	..	45*
Trains handling empty, specially equipped gondola cars (TOPS) car kind code "GP")	..	45**
Trains handling pipe loaded on 89 ft. flat cars	..	55
PC 598500 to 598999 (Gondolas)	..	55
Continuous Welded Rail (CWR) Trains
Loaded only	..	45***

*Anode cars (TOPS car kind code "FA") are NOT to be considered as a bulkhead flat car.

Restricted empty bulkhead flat cars will be identified on Train Mass Profile (graph) by a vertical row of asterisks (*).

**Train handling empty, specially equipped gondola cars (TOPS car kind code "GP") will be identified on Train Mass Profile (graph) by a vertical row of asterisks (*).

***Loaded CWR trains must be handled separately from other trains.

5. PLACEMENT OF RESTRICTED CARS IN TRAIN WITH OR WITHOUT HELPER:

(a) Between Roseville and Dunsmuir and Roseville and Sparks, empty 73-foot-long or longer equipment must be entrained ten or more cars behind road engine and ten or more cars ahead of helper engine. A flat car with one van or one container, whether loaded or empty, must be considered as an empty. These instructions will not apply to trains OANPT, RGMIA, UPMIA or UPWSA handling 5,000 tons or less, nor to trains BRLAT, BROAT, LABRF, LABRT, OABNT, OABRT, OAOGF, OAOGH, OAOGJ, OANPY, OGOAT, PIOGN, RGOAT, RVNPE, UPSFF or UPSFT.

(b) When average weight of cars in train, other than locals or switchers, is more than 60 tons per car, do not handle any cars which weigh less than 50 tons within five cars of road engine. These instructions will not apply to continuous welded rail (CWR) trains nor to trains OANPT, RGMIA, UPMIA or UPWSA handling 5,000 tons or less nor to trains operating between Roseville and Oakland via Davis, to trains OAOGF, UPSFF, and UPSFT operating between Ogden and Roseville, or to WPRR trains FF, GGV, B-PBF and OMW operating between Alazon and Weso, or to the LABRT and RVFRY between Fresno and Roseville.

(c) Following series of USAX or DODX cars are restricted to movement on rear of train and behind any helper engines:

38016 thru 38666 and 39095 thru 39199

Restricted cars will be indicated on conductor's train list at terminals. When cars listed in above series are picked up at locations other than terminal, they must be entrained on rear of train and behind any helper engine, unless it is determined that cars are not restricted.

(d) Cars measuring less than 42 feet between coupler pulling faces must not be handled in train coupled to cars longer than 73 feet between coupler pulling faces.

In addition, empty tank cars under 35 feet between coupler pulling faces will be entrained within 20 rear cars of train.

The Train Mass Profile (graph) will identify a car measuring less than 42 feet between coupler pulling faces with letter "S," tank cars less than 35 feet with the letter "TS." Cars measuring over 73 feet between coupler pulling faces will be identified by the letter "L."

SPECIAL INSTRUCTIONS—ALL SUBDIVISIONS

6. HELPER SERVICE:

NOTE: For classification of engines, see Misc. Item 2.

A. Rule for entraining one helper engine:

- (1) On trains of less than 100 cars, helper engine consisting of not more than two six-axle operating units totaling 179,400 pounds tractive effort nor more than two four-axle operating units totaling 135,600 pounds tractive effort or a combination of one four-axle and one six-axle operating unit totaling 157,600 pounds tractive effort may be placed behind caboose.
- (2) On trains of 100 or more cars helper engine consisting of only one unit may be placed behind caboose.
- (3) Helper engine that does not qualify under (1) or (2) must be entrained as near as practicable to shove 1/3 and pull 2/3 of tonnage handled by helper engine.
- (4) Engine consists weighing more than 850,000 pounds (Operating or isolated) must not be placed behind caboose as helper, except may assist in setting out bad order cars or recoupling train.

B. Rule for entraining more than one helper engine:

- (1) Trains having more than one helper engine must have each engine entrained as near as practicable so that it will shove 1/3 and pull 2/3 of tonnage handled.
- (2) Trains powered with two helper engines, one of which qualifies to be placed behind caboose, must entrain the swing helper as near as practicable to shove 1/3 and pull 2/3 of tonnage handled by the swing helper.

C. Air must be cut in on all helper engines and helper engine must not be coupled nor uncoupled while train is in motion.

D. Road engineer and helper engineer must communicate any change affecting the operation of their train when means of communication is available. When speed is being held above 8 MPH on ascending grade, helper engineer must regulate amperage during speed reductions or speed increases to maintain the amperage indicated before speed change; if speed of train drops below 8 MPH or when coming to a stop on ascending grade, helper engineer must regulate amperage during speed reduction to maintain the amperage indicated before speed change, then close throttle just before train stops.

E. When speed of trains powered with 12,000 or more horsepower on the head end and with helper engine drops below 16 MPH, road engineer must reduce throttle to Run 6.

When train speed drops below 16 MPH, head end power being reduced to Run 6 may result in helper power working in short time rating. The short time rating must not be exceeded. If it appears that short time rating will be exceeded, assistance must be requested from train dispatcher. If assistance cannot be obtained, grade must be doubled.

F. Trailing tonnage must not exceed that amount of tonnage listed under column "Maximum Tonnage to be Handled by Road Engine With Helper Entrained" for territory over which helper will be used. Should the amount of tonnage computed exceed the maximum tonnage listed, it may be necessary to isolate road units or add helper power. If practical, isolate units behind the lead unit leaving operating units next to the train. Weight of those units isolated and separated from the train by operating units need not be added to train weight in computing location of helper. If units have to be isolated next to the train, weight of these units must be added to the train when computing location of the helper. If units are moved dead in consist, they should be placed next to the train and their weight added to the tonnage of the train.

UNLESS OTHERWISE RESTRICTED MAXIMUM TONNAGE TO BE HANDLED BY ROAD ENGINES WITH HELPERS ENTRAINED:

TERRITORY

Roseville-Colfax (E)	6,500
Colfax-Norden (E)	4,200
Sparks-Truckee (W)	6,500
Truckee-Norden (W)	4,500
Wells-Moor (E)	7,500
Lucin-Valley Pass (W)	8,000
Delta-Dunsmuir (E)	7,500

UNLESS OTHERWISE RESTRICTED MAXIMUM TONNAGE TO BE HANDLED BEHIND HELPER ENGINES:

TERRITORY

Roseville-Colfax (E)	5,525
Colfax-Norden (E)	3,315
Sparks-Truckee (W)	5,525
Truckee-Norden (W)	3,825
Wells-Moor (E)	6,375
Lucin-Valley Pass (W)	6,800
Delta-Dunsmuir (E)	3,812

G. In locating helper engine(s) in train, the following example of calculating tonnage for road engine and helper engine(s) will be used:

EXAMPLE:

Train: 42 loads, 87 empties = 5756 tons.
 Four-unit road engine (2-GF630, 1-EF623, 1-EF625).
 Three-unit helper engine (2-EF623, 1-EF630).

Total road horsepower	10800
Total helper horsepower	7600
Total horsepower	18400

(1) Divide total horsepower by tonnage =

$$\frac{18400}{5756} = 3.196 \text{ HP/T}$$

(2) Divide road horsepower by HP/T factor =

$$\frac{10800}{3.196} = 3379 \text{ tons}$$
 Road engine will handle 3379 tons

(3) Divide helper horsepower by HP/T factor =

$$\frac{7600}{3.196} = 2377 \text{ tons}$$

(4) To determine 1/3 of helper tonnage divide

$$\frac{2377}{3} = 792 \text{ tons}$$
 Helper engine will shove 792 tons.

(5) To determine 2/3 of helper tonnage multiply 792 x 2 = 1584 tons
 Helper engine will pull 1584 tons.

(6) Under no circumstances should the tonnage that will trail the helper engine exceed that amount indicated in the chart.

(7) Should tonnage trailing road or helper engine, as computed above, exceed the amount indicated in the chart it will be necessary to:

- (a) Reduce tonnage or
- (b) Relocate helper in compliance with instructions. (Item L) or,
- (c) Add additional helper(s) of sufficient horsepower to handle tonnage in excess of amounts indicated in chart. Additional helper(s) may be placed behind caboose if they meet requirements of item A 1., if not they are to be entrained as follows:

EXAMPLE:

Train: 170 loads, 2 empties = 13,980 tons
 Three-unit road engine (1-EF630, 1-EF636, 1-GF633)
 Four-unit swing helper (1-EF630, 2-EF636, 1-GF633)
 Two-unit rear helper (1-EF618, 1-EF630)

Total road horsepower 9900
 Total swing helper horsepower 13500
 Total rear helper horsepower 4800

Total horsepower 28200

- (1) Divide total horsepower by tonnage = $\frac{28200}{13980} = 2.017 \text{ HP/T}$
 - (2) Divide road horsepower by HP/T factor = $\frac{9900}{2.017} = 4908 \text{ tons}$
 Road engine will handle 4908 tons
 - (3) Divide swing helper horsepower by HP/T factor = $\frac{13500}{2.017} = 6693 \text{ tons}$
 Swing helper will handle 6693 tons (total)
 - (4) To determine 1/3 of swing helper tonnage = $\frac{6693}{3} = 2231 \text{ tons}$
 Swing helper will shove 2231 tons
 - (5) To determine 2/3 of swing helper tonnage = $2231 \times 2 = 4462 \text{ tons}$
 Swing helper will pull 4462 tons
 - (6) Divide rear helper horsepower by HP/T factor = $\frac{4800}{2.017} = 2380 \text{ tons}$
 Rear helper will handle 2380 tons (total)
 - (7) To determine 1/3 of rear helper tonnage = $\frac{2380}{3} = 793 \text{ tons}$
 Rear helper will shove 793 tons.
 - (8) To determine 2/3 of rear helper tonnage = $793 \times 2 = 1586 \text{ tons}$
 Rear helper will pull 1586 tons.
- H. At locations designated by the Superintendent, road power must not exceed 24 axles of operative power.
- I. Helper engine must not be placed on head end of train without authority being obtained from train dispatcher.
- J. Not more than two units (operated or isolated helper consist) may be placed behind caboose at any time.
- K. ES412 and ES415 class units must not be cut into train in helper service. No more than two of these units may be placed behind the caboose.
- L. Should it become necessary to relocate the helper at other than the shove 1/3, pull 2/3 location in order to separate helper from restrictive cars or in compliance with maximum tonnage trailing helper limitations, the helper may be relocated, but under no circumstances in relocations may helper shove less than 30% nor more than 45% of the total tonnage to be handled by the helper.
- M. When helper is used on train handling empty coil cars in series SP 595500 to SP 595624, helper engine must be entrained ahead of these cars.

7. MOVEMENT OF LOCOMOTIVES

RULES GOVERNING MOVEMENT OF ENGINES NOT EQUIPPED WITH ALIGNMENT CONTROL COUPLERS

1. AS420, ES415, and following ES412 (2266, 2271, 2272, 2275, 2276, 2279, 2282, 2283, 2284, 2285, 2286, 2287, 2288) class engines must if practicable, be MU'd in accordance with rules. These engines are equipped with dynamic brake wire.
2. When necessary to entrain the following class engines:

ES406	ES408B	ES410	ES415
AS407	ES409	ES410E	AS420
GS407	AS409	ES412	
ES408	AS410	ES412E	

 Placement in train will be as follows:
 - a. Foreign line switch engines are to be considered in above listings.
 - b. Engines moved dead in train must be prepared for such movement.
 - c. These engines may be moved on the head end of train, provided train does not exceed 800 tons.
 - d. On trains of more than 800 tons, these engines must be moved not less than 5 cars nor more than 10 cars ahead of rear of train and behind any helper engine.
 - e. Not more than two of these engines may be moved in a train and when two are moved they must be separated by a car no longer than 50 feet.

3. When only AS420, ES412 and ES415 units listed in item 4 are used in engine consist, not more than two units may be used.

4. Before handling in multiple units, AS420, ES415 and following ES412:

2266	2272	2276	2282	2284	2286	2288
2271	2275	2279	2283	2285	2287	

- unit(s) must be positioned in engine consist as follows:
- a. No more than two will be MU'd in any one consist.
 - b. When MU'd with one freight unit, the freight unit must be coupled against train.
 - c. When one is used with two or more freight units, it will be placed as second unit in consist.
 - d. When two are used with two or more freight units, they will be placed as second and third units in consist.
 - e. If necessary to make a reverse move with cars or train, lead unit must be isolated.

5. Extreme caution must be used during dynamic braking or when making reverse moves to prevent jackknifing and track damage.

6. Engines equipped with multiple unit controls (MU) weighing 150,000 pounds or more, may be handled on head end of train; if weighing less than 150,000 pounds, must be placed near rear of train.

INSTRUCTIONS FOR USE OF HINGED COUPLER STOPS

For use in switching service the coupler stops must be opened (swung back) against end of engine and locking pin secured in bracket provided.

For use in road service, MU service, or dead in train, the coupler stops must be closed (swung in) into coupler opening against coupler pocket side with locking pin secured behind coupler carrier on both ends of engine.

Locking pins must be in place (whether coupler stop is swung back or swung in) to insure securement of the coupler stop.

Class ES415, Nos. 2450-2679 are equipped with hinged coupler stops.

PREPARATION OF AIR EQUIPMENT
FOR MOVEMENT DEAD IN TRAIN

ALL UNITS:

- Reduce main reservoir pressure to 25 lbs. above zero.
- Cut in dead engine feature.
- Remove automatic brake valve handle in running position or with 26-L equipment, remove in handle off position.
- If brake valve handles cannot be removed, they must be blocked in running position.

IN ADDITION:

24 RL equipment:

Close brake pipe cut-out cock and place the dual ported cut-out cock in cut-in position.

Open the end cocks on actuating pipe and independent application and release pipe.

6 SL or 14 EL Equipment:

Close the brake pipe cut-out cock, or place the rotair valve or 3 position brake pipe cut out cock in dead position.

26 L Equipment:

Place the brake pipe cut off valve in cut-out position.

Place the dual ported cut-out cock in open or cut-in position, or place the MU 2A valve in lead or dead position.

Open the end cocks on actuating pipe and brake cylinder equalizing pipe.

8. Dead or disabled engines, and equipment listed in timetable which requires movement at reduced speed must first be reported as ready to move to the Chief Train Dispatcher, who will designate the train in which the engine or equipment is to be moved. Any such engine must not be handled in train until train order designating maximum speed is issued.

9. In event overspeed device (or speed indicator) malfunctions enroute on a controlling unit which has no overspeed cut-out cock, unit should be rearranged in the locomotive consist as a trailing unit to clear the condition.

10. When a unit or units in locomotive consist emit excessive smoke through exhaust stacks other than from a cold start, prompt report must be made to train dispatcher who will arrange to notify roundhouse foreman or locomotive maintenance forces on duty at first maintenance facility where train is scheduled to stop. Unit number, time and location where excessive smoking of unit was first observed must be reported.

When a yard engine is observed emitting excessive smoke, report must be made to roundhouse foreman or locomotive maintenance forces on duty.

In addition, engineer must make appropriate entry on work report, Form CS 2326.

11. Not more than 10 units in multiple operative or inoperative may be entrained on head end of any train.

12. Except when handling cabooses on or near the head end in local or road switcher service, when handling only a few cars, cabooses are not to be moved other than at rear of train, unless specifically authorized.

13. When setting out bad order cars enroute, head portion of train, together with bad order car, must be taken to the nearest set out point in direction of movement, bad order car set out, engine detached and head portion of train left at set out point, when practicable. Rear portion of train is then to be brought to set out point and head and rear portions of train coupled together.

14. LOAD LIMIT

Where 315,000 pound load limit applies:

Gross weight of 315,000 pounds applies to uniformly loaded four-axle cars with minimum axle spacing of 6'-0" and minimum distance of 37'-0" center to center of trucks; also wheels 38" or more in diameter.

FMLX tank cars, 19000-19023, and GATX tank cars, 94050-94054 and 94056-94092, which are equipped with 34'-8" truck centers may operate from Ogden to Newark with no more than two such cars coupled together.

Where 263,000 pound load limit applies:

Gross weight of 263,000 pounds or less applies to uniformly loaded four-axle cars having trucks spaced 23'-0" or more center to center and minimum axle spacing of 5'-6".

Where maximum load limit shown is 263,000 pounds or more, gross loads of 395,000 pounds may be handled on 6 (six) axle tank cars when load limit of car is not exceeded.

Where maximum load limit is 263,000 pounds or more, gross loads of 526,000 pounds may be handled on 8 (eight) axle tank cars, with a maximum of 3 (three) tank cars coupled together, when load limit of cars is not exceeded.

15. Gross weight of SPMW 6400-6439 100-ton air dump cars cannot exceed the gross weight shown in Timetable or Line Clearance Circular for each branch line. Also, cars must not be dumped on curves of 25 degrees or more, or operated through curves of 35 degrees or more.

16. SNOW SERVICE:

- (1) Rotary snow plow will not clear certain structures, tunnels and cuts with wings extended; be governed by instructions posted in rotary cab.
- (2) Rotary snow plows must be stopped with wings in closed position when a train or engine is passing on adjoining track.
- (3) Flangers operating in snow territory must raise flanger blades and stop while train or engine is passing on adjacent track.

17. REPEATER AIR CARS (RAC) SP 260 Thru 266

The repeater air car (RAC) is utilized to increase efficiency of train air brakes on long trains and during cold weather. The purpose of repeater relay equipment is to accept pneumatic signals from the brake pipe of forward portion of a train, and by relay action, produce a corresponding response in the brake pipe of the rear section of the train.

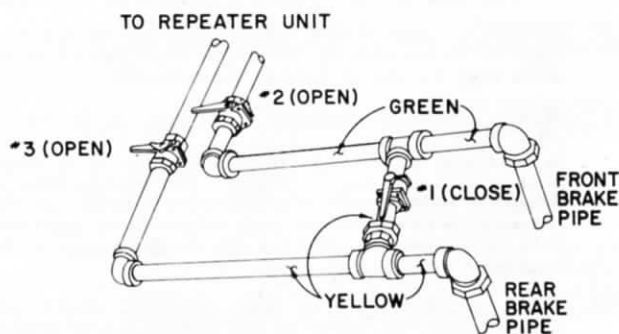
The repeater relay car has the ability to produce faster train charging time, reduce or eliminate brake pipe pressure gradient, more uniform braking forces, and faster brake application and release times.

A. Procedure for adding Repeater Air Car to a train to use Repeater Car Air Equipment.

1. Place as near to center of train as makeup will permit.
2. The RAC car is operational in either direction. The front brake pipe must be coupled to the portion of the train to which the road engine is attached. The rear brake pipe must be coupled to the other end of the train.

The angle cock on the unused brake pipe on each end of the car must be closed.

3. Where repeater air car is positioned in train and front and rear brake pipes have been properly connected and opened, then close the brake pipe bypass cock No. 1 and open the two repeater relay cut-out cocks Nos. 2 and 3, all located inside of car.



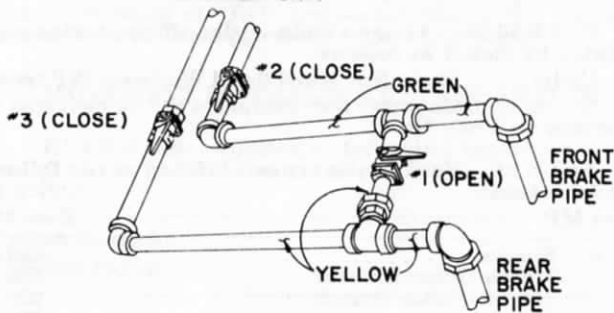
Note: If for any reason it becomes necessary to transfer control of air brakes to the helper engine located in the portion of the train behind the RAC car with the RAC air equipment in operation, the brake pipe hose connections must be changed. The forward brake pipe must be coupled to the portion of the train having the brake valve which is controlling the train. The rear brake pipe must be coupled to the other end of the train.

- The repeater relay valve No. 5 is a variable valve and is employed to reestablish a satisfactory brake pipe pressure on the rear portion of train. A regulator and gage to indicate pounds of differential is provided. Trainline pressure on rear portion of train must not be increased above 90 PSI at RAC car. Preferred adjustment is to have the rear brake pipe 1.5 to 2 lbs. above the front brake pipe.

B. Procedure for cutting the RAC car out of train.

- Close the repeater relay cut-out cocks Nos. 2 and 3.
- Open the brake pipe bypass cock No. 1—All located inside the car.
- The car diesel engine and compressor are to remain running except during layover time.

TO REPEATER UNIT



C. Procedure for adding Repeater Air Car to a train when Repeater Car Air equipment is not to be used.

- Close the repeater relay cut-out cocks Nos. 2 and 3.
- Open the brake pipe bypass cock No. 1—All located inside the car.
- Forward brake pipe must be coupled to portion of the train to which the road engine is attached.

Rear brake pipe must be coupled to the other end of the train. The angle cock on the unused brake pipe on each end of the car must be closed.

D. Train operation of Repeater Air Cars.

- With the repeater air car in operation, proceed with terminal air test as prescribed in the air brake rules and regulations.
- All rules outlined in the air brake rules and regulations governing train handling shall be adhered to while repeater air car is part of any train.
- If required, the repeater air car may be cut out by closing the repeater relay cut-out cocks Nos. 2 and 3 and opening the brake pipe bypass cock No. 1—All located inside car. This provides for normal train operation without the repeater relay equipment operating.
- If yard air is used to charge the train, it must be cut in ahead of the repeater air car.
- The RAC car must not be kicked, dropped, or humped.
- During a pickup or setout, or at any time the engine is separated from the train and the air car is in operation in the train, IT IS ABSOLUTELY ESSENTIAL THAT THE TRAINLINE ANGLE COCK BE LEFT OPEN ON THE TRAIN.

E. Loss of Main Reservoir Air on RAC car.

- The depletion of main reservoir air to below 100 lbs. will initiate a service brake pipe reduction in the forward and rear portions of the train.
- When main reservoir pressure drops below 110 pounds, a radio signal will be initiated and will transmit a series of short beeps for a period of approximately ten seconds and then cease. It will reset itself automatically upon an increase of main reservoir pressure above 110 pounds.
- If in power, throttle must be reduced to idle and automatic brake valve placed in full service zone until train stops.
- If in dynamic braking, automatic brake valve must be placed in full service zone and dynamic braking lever handled as prescribed by rules.
- Train must be immediately secured before determining reason for main reservoir air depletion.

F. Setting RAC car out of train

- If it becomes necessary to set RAC car out of train, shut down compressor engine in car and secure car per rules.

Instructions for starting and shutting down compressor engine posted inside of car.

18. MOVEMENT OF PASSENGER TRAINS

Passenger trains are restricted to movements on main tracks, sidings and designated receiving tracks at Passenger Depots only. Movement on any other tracks must be authorized by the Chief Train Dispatcher.

19. Trailer flat cars, tri-level automobile carrying cars and 30,000-gallon "Super Tanker" tank cars, all 80 and 85 feet long. "Jumbo" tank cars HYDX 701 to 706, inclusive, loaded or empty, without authority of Chief Train Dispatcher must not be operated on any branch, on west leg of wye at Chico, or on industry, yard tracks, or interchange tracks within Sacramento yard limits. These cars can be operated on 12th St. yard tracks, new yard, 6th St. yard, levee tracks, freight leads, back leads and Depot No. 1, in Sacramento.

20. Following are commercial Telephone numbers for train dispatchers. These numbers are to be used for emergency purposes only:

- Stockton Subdivision (916) 782-1776
- Roseville Subdivision
- Salt Lake Subdivision—Mina Branch
- Valley Subdivision
- West Valley Line—Davis to Tehama, Colusa, Hamilton and Knights Landing Branches (916) 782-3282
- Valley Subdivision
- East Valley Line
- West Valley Line—Tehama to Gerber . . (916) 782-1776
- Salt Lake Subdivision
- (Except Mina Branch) (916) 782-3243

SPECIAL INSTRUCTIONS—SALT LAKE SUBDIVISION

RULE P. LOCATION OF OVERHEAD AND SIDE STRUCTURES NOT STANDARD CLEARANCE ON MAIN TRACK AND SIDINGS

MP	Location	Description
249.84	Vista	Truckee River bridge No. 5 Overhead & side
250.99	Vista	Truckee River bridge No. 6 Overhead & side
258.07	Patrick	Truckee River bridge No. 7 Overhead & side
260.55	Wunotoo	Wide Load Detector Side
299.87	Wadsworth	Truckee River bridge No. 1 Side
295.05		Government canal bridge Side
302.08	Fallon	Carson River bridge Side
302.50	Fallon	Government canal bridge Side
518.91	Barth	Humboldt River bridge No. 6 Side
519.68	Barth	Humboldt River bridge No. 8 Overhead & side
523.25		WPRR crossing Overhead
523.34		Humboldt River bridge No. 14 Overhead & side
525.15	Palisade	Humboldt River bridge No. 15 Overhead & side
525.20	Palisade	Tunnel No. 1 Overhead & side
525.42	Palisade	Humboldt River bridge No. 16 Side
539.54		Tunnel No. 2 Overhead & side
542.45		Humboldt River bridge No. 24 Overhead & side
566.55	Ryndon	Tunnel No. 3 Overhead & side
567.19	Ryndon	Humboldt River bridge No. 25 Overhead & side
569.85	Ryndon	Humboldt River bridge No. 27 Overhead & side
570.36	Ryndon	Humboldt River bridge No. 28 Overhead & side
	Salt Lake Trestle (between Bridge and Tresend)	Side
778.51		Weber River bridge No. 2 Side

RULE 7-C. Carlin: Eastward trains via Southern Pacific portion of paired track must not pass stop sign located at Mile Post 533.75 unless orally authorized or proceed signal is received.

Sparks: Switchmen must use green flag by day and green light by night or oral authorization in giving proceed signals for movement of trains or road engines.

RULE 10-J. Speed may be increased as soon as lead engine has passed increase speed sign at following locations:

Westward MP	Eastward MP
475.3	Battle Mountain

Speed sign to right of track with one track intervening:

Westward	Reading	Eastward	Reading
MP 343.8	70-55		
MP 417.4	70-55		
MP 607.1	70-55	MP 606.63	40

Speed signs to left of track with one track intervening:

Westward	Reading
MP 245.2	20

Speed signs located to left of track in direction of movement:

Westward	Reading	Eastward	Reading
MP 249.1	30	MP 244.2	30
MP 249.4	70-55	MP 247.1	70-55
MP 266.8	60-55	MP 248.6	60-55
MP 276.1	55	MP 252.7	60-55
MP 754.5	{ No. 2 Track 20 Thru turnout	MP 616.3	50
MP 641.5		70-55	

Speed signs duplicated to left of track:

Westward	Reading	Eastward	Reading
MP 754.5	50	MP 616.8	60-55
MP 739.7	70-55	MP 737.2	20

RULE 82-A. Wendel: WP train orders and clearances will be issued at SP train order office, and will apply to those who are to execute them on WP tracks between Flanigan and Carlin.

Sparks: WP train orders and clearances for eastward SP trains will be issued at SP train order office, and will apply to those who are to execute them on WP tracks between Weso and Carlin.

Carlin: Trains to Salt Lake Subdivision at Alazon originating at Carlin and/or operating through with same conductor and engineer will be issued clearances and/or train orders at Carlin to apply on Salt Lake Subdivision.

Alazon: Eastward SP regular trains authorized on WP are also authorized to assume corresponding schedule or section of schedule without obtaining SP clearance.

Elko: WP trains originating at WP Elko must obtain SP clearance "OK'd" by SP Chief Train Dispatcher.

RULE 83-A. Ogden: All trains except light engines and passenger trains will register at "RO" train-order office 28th Street. Incoming engineers of light engines will register their arrival at the Engine Crew Dispatcher's Office.

Conductor of passenger trains arriving will furnish register information via SP telephone Ext. 294 or 354 to "RO" train-order operator.

Engineers of passenger trains arriving will furnish register information to Engine Crew Dispatcher's Office via SP telephone Ext. 292 or 385.

At the following stations, only the trains indicated will register:

- Hazen.....Trains via Fallon Branch.
- Carlin.....All trains.

RULE 83-B. At open train-order offices, trains may register by ticket as follows:

- Carlin.....Train Nos. 5 and 6 and Westward WP trains.
- At Carlin, train orders and clearances will be delivered by messenger to Train No. 6.

RULE 93. Yard limits are established at the following locations:

West MP	East MP
231.6	Sparks.....249.5
	Hazen (Mina Branch).....289.5
	Hazen (Fallon Branch).....289.2
356.0	Wendel.....360.1
415.4	Mina.....418.0
533.4	Carlin.....536.5
554.0	Elko.....557.9
660.2	Montello.....663.8
780.2	Ogden.....

RULE D-97 applies:
 Between Sparks and Vista.
 Between Perth and Rose Creek.
 Between Weso and Alazon.
 Between Alazon and Moor.
 Between Valley Pass and Lucin.
 Between Bridge and Ogden.

RULE 99-C. Will apply on Mina Branch.

RULE 103. At the following locations train must stop to avoid unnecessary operation of crossing gates while receiving or discharging traffic:

Station	Location	Direction
Winnemucca	200 ft. west of Bridge St.	Eastward

Winnemucca: Crossing gate key control installed on Crossing Case 4175, Bridge Street. Eastward trains making stop west of Bridge Street on siding or house track must actuate key start before entering crossing.

Westward freight trains stopping to perform switching must leave train east of Bridge St. crossing or in siding, so as not to block crossing while engine is being attached or detached.

Eastward trains stopping on main track or siding must stop 200 feet west of Bridge St. markers on south side of tracks.

Battle Mountain: Freight trains stopping to perform switching must leave train east of main road crossing to avoid blocking crossing when engine is coupled to train.

Elko and Wells: Trains stopping to perform switching must leave train clear of all street crossings.

RULE 104. The normal position of rigid switches at end of double track and junctions is as follows:

- Hazen (Mina Branch) For controlled siding.
- Hazen (Fallon Branch) For Mina Branch.

Eastward trains after having been instructed to operate directly to DRGW will enter connection through spring switch located just east of Signal P-7802 and a member of crew will hand throw switch and return switch to normal position after movement is completed.

RULE 105. Montello: No. 1 track is for use of eastward trains only and when necessary for westward trains to use No. 1 track permission must be obtained from train dispatcher.

Little Mountain: When necessary to use siding permission must be obtained from train dispatcher.

RULE 221. Lights will not be displayed in train-order signals on the Mina Branch.

Elko: Is a train-order office only for trains originating.

Ogden: Conductor of freight trains originating will pick up clearances and train orders from "RO" train-order office at on-duty time if their train has been cleared. Otherwise, clearances will be delivered by tube to 21st Street.

Conductors of passenger trains originating will obtain clearances issued at "RO" train-order office which will be delivered by tube to change room at passenger depot.

MOVEMENT OF TRAINS BY STAFF SYSTEM

RULE S-240. Applies at following location:

Territory	Register Location
Fallon Branch:	
Hazen-Fallon.....	Hazen

RULE D-251. Will apply as follows:

- Between Sparks and Vista.
- Between Perth and Rose Creek.
- Between Weso and Alazon.
- Between Alazon and Moor.
- Between Valley Pass and Lucin.
- Between Bridge and Ogden.

RULE 292. Carlin: Eastward SP trains or engines moving from west detour to Carlin Yard must not pass light unit mounted on mast at MP 534.10 on west detour until flashing white light is displayed unless proceed signal or oral authorization is received from switchman.

When flashing white light is displayed, trains and engines may proceed at restricted speed on route lined without stopping.

Westward freight trains or engines must not pass Signal 5359 unless flashing white light is displayed or proceed signal is received from yardman or orally authorized to proceed.

When Signal 5359 displays stop indication and flashing white light is displayed, such trains and engines may proceed without stopping on main track or diverging route at restricted speed.

RULE 306. The following home signals equipped with triangular plate bearing the letter "P" have included in their control limits some special protective device. Absolute signals are listed as "P-A" or "P-SA"; interlocking signals are listed as "I" or "P-SA."

Eastward Signal	Protection	Westward Signal
P-2508 } P-A	Rock slide fence, MP 252.5	P-A
P-A	Rock slide fence, MP 254.5	P-2553
P-2554 } P-A	Rock slide fence, MP 256.6	P-A
P-A	Collision detector, roadway underpass, MP 275.4	P-A
P-A	Spring switch west end siding, Winnemucca	P-A
	Spring switch east end siding, Winnemucca	P-A
	Rock slide fence, MP 517.5-MP 518.1	P-5181
	Rock slide fence, MP 524.4	P-5255
	Rock slide fence, MP 527.0-MP 527.6	P-5277
	Rock slide fence, MP 530.5-MP 530.6	P-5315
	Rock slide fence, MP 530.6-MP 530.7	P-5315
	Rock slide fence over east portal Tunnel 2	P-5401
	Rock slide fence MP 541.1	P-5427
	Rock slide fence, east portal Tunnel 3	P-5673
	High water detector, Culvert MP 589.3	P-5915
	High water detector, Culvert MP 591.1	P-5915
	Spring switch EE crossover, Moor	P-SA
	Spring switch EE eastward siding, Moor	P-A
P-A	Spring switch west end westward siding, Valley Pass	P-A
	High water detector, Culvert MP 672.1 westward track	P-6733
	High water detector, Culvert MP 677.3 westward track	P-6775
	High water detector, Culvert MP 679.3 westward track	P-SA
P-6780	High water detector, Culvert MP 679.3 eastward track	{ P-SA P-A
	Spring switch east end eastward siding, Lucin	P-A
P-7428	Fill slide detector (No. 1 track) MP 743.2	P-A
*P-7476	Fill slide detector, east of Midlake, MP 747.7	P-7491
	Spring switch EE crossover—MP 780.1	P-7801
P-7802	Spring switch SP-DRGW connection	P-7803
	SP-DRGW connection	P-7803
	Spring switch EE crossover—MP 780.1	P-7805

When signals with triangular plate bearing letter "P" display stop indication in connection with rock slide fences at MP 517.5-MP 518.1; MP 524.4; MP 527.0-MP 527.6; MP 530.5-MP 530.6; MP 530.6-MP 530.7, inspection of track and structure may be made from engine.

*Limits of fill slide detector will be indicated by rotating red light when fill detector is actuated. Revolving red lights located as follows:

Eastward.....	MP 747.6
Westward	MP 748.1

When signals with triangular plate bearing letter "P" display stop indication in connection with fill slide detector (No. 1 Track) MP 743.25 and fill slide detector, east of Midlake, MP 747.66, inspection of track and structure may be made from engine.

AUTOMATIC BLOCK SIGNAL SYSTEM

RULE 505. Sparks: Signal 2468 governs movement of eastward trains from yard tracks. This signal is normally dark until switches are lined for crossover movement. If proceed signal is received from switchman or orally authorized and signal displays stop indication, train may proceed in accordance with Rule 81-A.

Westward freight trains, except UPSFF, UPMIA, UPWSA and UPSFT, must stop before passing Signal 2467 unless proceed signal is received from switchman or orally authorized. If proceed signal is received from switchman or orally authorized and signal displays stop indication, movement may be made as prescribed by Rule 507.

Carlin: Signal 5345 governs movement of westward trains from yard tracks and is normally dark until switches are lined for crossover movement. If proceed signal is received from switchman or orally authorized, and signal displays stop indication, train may proceed in accordance with Rule 81-A.

East Carlin: Detour extends from east ice house lead on SP to East Carlin on WP.

Eastward SP freight trains and other trains when so directed, also engines moving between WP and SP yards will use East Carlin and/or West Carlin detours.

West Elko: Detour extends from WP yard to West Elko on SP main track.

Junction switch is a spring switch and normal position is for SP main track.

Westward trains leaving WP yard via detour must enter approach circuit to indicate that such trains are ready to depart, and must not foul SP main track until letter "M" is displayed, or authority received from SP train dispatcher, either directly or through SP operator Carlin or WP operator at Elko.

When Signal 5545 on SP main track displays stop indication, westward trains on SP main track after stopping and obtaining train dispatcher's permission, either directly or through operator Carlin or WP operator at Elko, may proceed under the provisions of Rule 507, provided it can be seen that there is no train or engine closely approaching west end of detour to enter SP main track.

Elko: East detour extends from SP siding to WP freight yard.

Signals 6621 and 6623 may be cleared by operation of push button bearing number of signal. Push button and indication lights are located in box on signal case near these signals.

Ogden: Westward trains moving from SP-DRGW connection to main track must stop at Signal P-7801 and member of crew must push button bearing number P-7801 located on signal case. When Signal P-7801 indicates proceed, train may proceed.

Westward trains finding Signal P-7803 in stop position after stopping, member of crew must push button bearing number P-7803 located on signal case. When Signal P-7803 indicates proceed, train may proceed.

After member of crew has actuated push button, if signal does not clear, train may then proceed only after complying with Rules 81-A and 507, and in addition careful examination must be made of all facing point switches.

RULE D-506. Signal 7805 governs westward movements on eastward track against the current of traffic to eastward Signal 7802. Trains operating against the current of traffic on eastward track may resume authorized speed after rear of train passes eastward Signal 7802.

RULE 507. Elko: When westward Signal 5565 displays stop indication, westward Southern Pacific freight trains must stop clear of Fourteenth Street crossing, and not proceed until signal displays proceed indication or it can be ascertained the block is not occupied by a preceding train or engine.

RULE 509. Sparks: Westward first-class trains may pass Signal 2467 displaying stop indication without stopping upon receiving authorization from the yardmaster to move against the current of traffic on the eastward main track and proceed signal is received from switchman or movement is orally authorized. This authorization will confer authority for movement at restricted speed against the current of traffic from the crossover located at MP 246.87 to the west service columns, MP 246.00.

SPRING SWITCHES

RULE 538. Spring switches equipped with facing point locks are located as follows:

Station	Location	Normal Position
Winnemucca	East end siding	Main track
Winnemucca	West end siding	Main track
Weso	West switch, west crossover between SP and WP main tracks	WP main track
Weso	East switch, east crossover between WP and SP main tracks	WP main track
Moor	East end crossover	Main track
Moor	East end eastward siding	Main track
Valley Pass	West end westward siding	Main track
Lucin	East end eastward siding	Main track

Spring switches not equipped with facing point locks are located as follows:

Location	Normal Position	
*West Elko	West end WP detour	Main track
*Alazon	West switch of crossover between SP and WP main tracks	SP main track
*Wells	East switch eastward siding	Main track
*Montello	West end westward siding	Main track
*Lucin	West end westward siding	Main track
Ogden	Junction switch SP—DRGW connection	Main track
*Ogden	West switch crossover MP 780.15	Main track
*Ogden	East switch crossover MP 780.15	Crossover

*Equipped with switch-point indicator.

INTERLOCKING

RULE 606. Ogden: Limits extend on eastward main track from signal at MP 780.6 to MP 780.7 (310 feet).

DRGW Crossings at MP 781.4.

Westward interlocking signal governing westward movements on eastward track at Cecil Jct. and westward interlocking signal governing westward movements through power operated switch to eastward track at Cecil Jct. are equipped with switch key actuator start boxes. These signals will display proceed indication only when route is selected by Herder and the special switch key actuators are operated by a member of the train crew.

The switch key actuators are mounted on side of case on south side of track at signal location.

IN ADDITION, BEFORE MOVEMENT AGAINST CURRENT OF TRAFFIC IS MADE, PROTECTION MUST BE PROVIDED IN ACCORDANCE WITH PROVISIONS OF EITHER RULE D-160 OR RULE D-162.

LETTER-TYPE INDICATORS

RULE 705. Indicators located as follows:

Illum. Letter	On Signal	Approaching	Authorizes and requires movement as follows
S	P-A	Winnemucca eastward	Enter siding.
S	P-A	Winnemucca westward	Enter siding.
M	5543	WP connection	
		West Elko	Enter main track and proceed as prescribed by Rule D-251.
M	5565	Elko	Indicator applies to WP freight trains only. WP freight trains proceed on main track.
			If letter "M" is not displayed, WP freight trains enter SP siding and proceed through crossover to WP freight yard.
			Display of letter "M" at West Elko, does not relieve conductors or engineers of compliance with Rule 81-A.

CENTRALIZED TRAFFIC CONTROL

RULE 760. CTC limits extend from:

- MP 249.27 (Vista) to MP 340.26 (Perth),
- MP 406.5 (Rose Creek) to MP 421.0 (Weso),
- MP 713.60 WP main track } to { MP 713.90 WP main track
- MP 603.50 SP main track } { MP 603.80 SP main track
- MP 616.2 (Moor) to MP 641.6 (Valley Pass)
- MP 679.3 (Lucin) to MP 753.6 (Bridge)

Winnemucca: Trains required to enter Winnemucca siding must not pass absolute signal in advance of spring switch until switch has been lined for siding.

Weso: CTC is under control of WP train dispatcher at Sacramento. When absolute signal governing westward movement to SP main track displays stop indication, train must receive the following authority before proceeding:

- (a) WP train dispatcher under provisions of Rule 509(a)
- (b) SP train dispatcher under provisions of Rule 776

Two unit eastward absolute signal governing movement against the current of traffic on SP main track is equipped with switch key actuator start box. Permission must be obtained from SP Dispatcher, Roseville, before switch key is inserted in start box. Signals will not clear until switch key actuator is operated.

IN ADDITION, BEFORE MOVEMENT AGAINST CURRENT OF TRAFFIC IS MADE, PROTECTION MUST BE PROVIDED IN ACCORDANCE WITH PROVISIONS OF EITHER RULE D-160 OR RULE D-162.

Alazon: When absolute signals display stop indication, member of crew must contact SP train dispatcher for instructions. If signal can not be cleared, train dispatcher may authorize member of crew to operate push buttons in box mounted on signal house north side SP track. Instructions are posted in box.

If absolute signal can not be cleared by operation of push buttons, train must receive authority to proceed from SP train dispatcher under the provisions of Rule 776. If movement is to be made to WP main track, additional authority must be received from WP train dispatcher under provisions of Rule 509(a).

Single unit eastward "A" signal and westward "SA" signal on SP eastward main track govern movements against the current of traffic. They are equipped with switch key actuator start boxes. Permission must be obtained from train dispatcher before switch key is inserted in start box. Signals will not clear until switch key actuator is operated. IN ADDITION, BEFORE MOVEMENT AGAINST CURRENT OF TRAFFIC IS MADE, PROTECTION MUST BE PROVIDED IN ACCORDANCE WITH PROVISIONS OF EITHER RULE D-160 OR RULE D-162.

Moor: Westward "A" signal at west end of siding governing movements against the current of traffic is equipped with a switch key actuator start box. Permission must be obtained from train dispatcher before switch key is inserted in start box. Signals will not clear until switch key actuator is operated.

IN ADDITION, BEFORE MOVEMENT AGAINST CURRENT OF TRAFFIC IS MADE, PROTECTION MUST BE PROVIDED IN ACCORDANCE WITH PROVISIONS OF EITHER RULE D-160 OR RULE D-162.

GENERAL REGULATIONS

RULE 812. Be governed by current timetables, bulletins and rules of WP, on WP track between Flanigan and Alazon.

RULE 825. Sparks Yard: Not less than five hand brakes must be applied on east end of freight trains or cars. Hand brakes will not be applied if outgoing crew takes charge of train on arrival and if inbound crew is advised by yardmaster that engine is not to be detached.

Carlin Yard: Not less than three hand brakes must be applied on both east and west ends of unattended freight trains or cars.

Utah Industrial Park: Portable rail skids hung on posts at following location:

- Utah Ind. Park Spur East leg of wye
- Refer to Rule 825, All Subdivisions.

RULE 827. HIGH AND/OR WIDE LOAD, DRAGGING AND/OR DERAILED EQUIPMENT DETECTOR AND INDICATOR INSTALLED AT THE FOLLOWING LOCATIONS:

MP	Location	Protects Direction(s)	On Track
251.6	Hafed	Both	Main
260.5	Wunotoo	Both	Main
340.7	Perth	Both	Eastward
346.2	Lovelock-Colado	Both	Eastward
346.7	Colado	Both	Westward
355.8	Colado-Woolsey	Both	Westward
380.2	Humboldt-Imlay	Both	Eastward
387.2	Imlay-Mill City	Both	Westward
424.3	East of Tule	Both	Westward
452.0	On Hot Box Detector Equipment House	Both	Westward
469.9	Valmy-Mote Hot Box House	Both	Westward
479.65	East of Battle Mountain	Both	Westward
498.60	East of Mosel	Both	Westward
512.90	East of Beowawe	Both	Westward
WP639.1	On Hot Box Detector Equipment House	Both	Eastward
547.1	On Hot Box Detector Equipment House	Both	Westward
558.9	East of Elko	Both	Main Track
604.6	Alazon	Both	Eastward
610.4	East of Wells	Both	Westward
641.8	On Hot Box Detector Equipment House	Both	Eastward
676.4	On Hot Box Detector Equipment House	Both	Eastward
731.8	On Hot Box Detector Equipment House	Both	Main Track
756.1	On Hot Box Detector Equipment House	Both	Eastward
757.9	On Hot Box Detector Equipment House	Both	Westward
772.0	On Hot Box Detector Equipment House	Both	Eastward
776.0	On Signal 7760	Both	Eastward

@ Indicates High Wide Load detector.

SPECIAL INSTRUCTIONS—SALT LAKE SUBDIVISION

HOT BOX DETECTORS

Illum. Letter	On Signal	Approaching	Location of Readout
H	4243	Tule	MP 422.8 Tule
W	4293	Tule	
H	4893	Argenta	MP 487.4 Argenta
W	4917	Argenta	
H	5091	Beowawe	MP 507.7 Beowawe
W	5133	Beowawe	
H	5787	Halleck	MP 576.4 Halleck
W	5829	Halleck	
H	5961	Deeth	Signal 5937
W	5999	Deeth	
H	Westward "A" Signal		
	E.E. Lemay	Lemay	Westward "A" Signal
			W.E. Lemay
W	7044	Groome	
W	7063	Lemay	
H	7082	Groome	Eastward Absolute Signal E.E. Groome

When letter "W" is illuminated, train must stop. Member of train crew must contact train dispatcher before proceeding and be governed by his instructions.

SCANNER SITES

MP	Type	Direction(s)	Location
251.6	C	Both	Hafed
270.5	C	Both	Thisbe-Fernley
297.0	C	Both	Massie-Upsal
323.7	C	Both	Ocala-Toy
346.2	C	East	Lovelock-Colado
355.8	C	West	Colado-Oreana
380.2	C	East	Humboldt-Imlay
387.2	C	West	Imlay-Mill City
412.0	C	Both	Rose Creek-Winnemucca
427.3	A	West	Tule-Golconda
452.0	C	Both	Iron Point
469.9	C	West	Valmy-Mote
491.0	A	West	Argenta-Mosel
512.5	A	West	Beowawe-Harney
639.1 (WPRR)	C*	East	Approaching Carlin
547.1	C	West	Moleen
581.0	A	West	Halleck-Deeth
599.0	A	West	Deeth
620.6	C	Both	Moor-Holborn
641.9	C	East	Valley Pass-Cobre
644.2	C	West	Cobre
664.0	C	East	Montello-Tecoma
665.8	C	West	Tecoma
676.4	C	Both	Tecoma-Lucin
683.8	C	Both	Lucin-Pigeon
706.0	A	Both	Lemay-Groome
731.8	C	Both	Strongknob-Lakeside
757.9	C	West	Bridge-Promontory Pt.
756.1	C	East	Saline
772.0	C&D**	Both	Little Mountain

*This is an SP hot box detector and SP crews will be governed by applicable SP rules when approaching and passing this device.

**Type "D" feature for UP readout at Ogden.

Refer to Rule 827, All Subdivisions.

RULE 872. Sparks and Carlin: Enginemen taking charge of road engines will consider engines as having been amply supplied with water, fuel, sand and other supplies.

AIR BRAKE RULES

RULE 2, A. Taking Charge of Engines.
Will apply at:

Sparks, Carlin and Ogden.

FREIGHT TRAINS

RULE 17. Retaining valves must be used on descending grades as follows:

Reservation to Schurz:

WITHOUT DYNAMIC BRAKE IN OPERATION:
One retaining valve for each 80 tons in train. If gross tonnage exceeds 80 tons per operative brake, retaining valves must be used on all cars and speed must not exceed 15 MPH.

WITH DYNAMIC BRAKE IN OPERATION:

Permissible Tons Per Unit Without Retaining Valves

	Basic-Dynamic Brake		Extended Range Dynamic Brake	
	4 Axle	6 Axle	4 Axle	6 Axle
With dynamic brake in operation but without pressure maintaining system of braking:	650	950	800	1200
With dynamic brake in operation and with pressure maintaining system of braking:	1600	2400	2000	3000

If permissible tonnage is exceeded, one retaining valve must be used for each 150 tons in excess thereof.

Moor to Wells, Valley Pass to Montello.

WITHOUT DYNAMIC BRAKE IN OPERATION:

One retaining valve for each 80 tons in train. If gross tonnage exceeds 80 tons per operative brake, retaining valves must be used on all cars and speed must not exceed 15 MPH.

WITH DYNAMIC BRAKE IN OPERATION:

Permissible Tons Per Unit Without Retaining Valves

	Basic Dynamic Brake		Extended Range Dynamic Brake	
	4 Axle	6 Axle	4 Axle	6 Axle
With dynamic brake in operation but without pressure maintaining system of braking:	525	775	650	950
With dynamic brake in operation and with pressure maintaining system of braking:	1800	2700	2300	3500

If permissible tonnage is exceeded, one retaining valve must be used for each 150 tons in excess thereof.

Retaining valves may be turned up when stops are made at any of the following stations:

Westward . . . Holborn or Moor
Eastward . . . Moor, Holborn, Pequop, Valley Pass, Cobre.

When retaining valves are used Valley Pass to Montello, stop for heat radiation need not be made if there is no indication of wheels overheating and in the judgment of engineer and conductor it is safe to proceed.

Refer to Air Brake Rule 17, All Subdivisions.

RULE 24. Will apply at Carlin to SP trains only.

RULE 24-G. Will apply at Sparks and Elko.

RULE 25. Will apply to eastward trains at Reservation when retaining valves are being used.

Will apply to eastward trains at Valley Pass and to westward trains at Moor when retaining valves are being used, except when cars are to be set-out or picked up at Cobre. Eastward trains may pass Valley Pass without stopping for air brake test, provided test is made at Cobre.

To avoid additional stops at stations indicated above, trains may make inspection, air brake test and turn up retaining valves when stops are made at the following stations:

- Westward Holborn or Moor
- Eastward Moor, Holborn, Pequop or Valley Pass.

RULES 25-A and 26. Flashing light temperature indicators are installed at Signals 6186 and 6381, between Moor and Valley Pass. When flashing on approach of train, will indicate that the temperature is below 32 degrees.

When flashing, apply Rule 25-A, if unable to obtain a proper air test while running, train must be stopped and air brake hoses blown out as prescribed by Rule 26.

RULE 25-B. Will apply to westward freight trains when engine passes station one mile sign approaching Valley Pass, and to eastward freight trains when engine passes station one mile sign approaching Moor.

RULE 33. Reservation to Schurz: Maximum tonnage per operative brake—80 tons, except with dynamic brake and pressure maintaining system of braking in operation with not more than 20 cars for each six axles of dynamic brake; with speed not exceeding 25 MPH, and with all retaining valves on loaded cars in high pressure position—100 tons.

Insufficient dynamic brake capacity or failure of dynamic brake which results in exceeding these tonnages per axle, is to be considered as operating without dynamic brake.

Should dynamic brake failure occur or partial failure of dynamic braking occur resulting in insufficient dynamic brake capacity, train is to be considered as operating without any dynamic brake. Trains must stop and all retaining valves turned up. Train may then proceed not exceeding 15 MPH if, in the judgment of the conductor and engineer, it is safe to do so.

Restrictive grades are as follows:

MINA BRANCH

EASTWARD	MP to MP	MPH
	337.5 340.0	25
	347.5 351.5	25
	394.2 396.6	25
WESTWARD	394.2 393.0	25

Restrictive grades are as follows:

EASTWARD	MP to MP	MPH
Cobre to East of Cobre	645.4 654.0	25
Tecoma to East of Tecoma	670.0 675.0	25
WESTWARD		
Moor to Wells	616.3 607.8	25

PASSENGER TRAINS

RULE 17. Use of retaining valves is not required when dynamic brake is in operation and/or pressure maintaining system of braking is being used on descending grades Moor to Wells and Valley Pass to Montello.

RULE 38. Will apply at Sparks and Carlin.

MISCELLANEOUS

1. Engines listed must not operate on tracks shown below:

Class of Engine	Restricted Tracks
All engines	East Colado—Beyond curved portion of track at either end of Nevada Barth track.
	Carlin—Vogler spur over track scale.
All engines	Lucin—Beyond engine restriction signs on South Spur.
All engines	Elko—Vogeler Whse. spur over track scale.
All engines	Carlin—Vogeler Whse. spur over track scale.
All engines	Utah Industrial Pk—over GSL track scale.

2. LOAD LIMIT (car and contents):

- *Sparks-Ogden 315,000 pounds
 - *Hazen-Fallon 263,000 pounds
 - Hazen-Wabuska 281,000 pounds
 - *Wabuska-Mina 263,000 pounds
 - *Refer to All Subdivisions, Page 18, Miscellaneous, Item 14.
- Unless authorized by Superintendent, heavier loads must not be handled.

3. SP and WP eastward trains will use WP track from Weso to Alazon being governed by WP Rules, Timetable, Special Instructions and Timetable Bulletins.

SP and WP westward trains will use SP track from Alazon to Weso being governed by SP Rules, Timetable, Special Instructions and Timetable Bulletins.

Current of traffic on SP track from Alazon to Weso is westward and trains will operate under SP rules applicable to double track.

4. Only engines listed may operate on branches shown below:

Class of Engine	Branch
ES412	} Mina Branch, between Wabuska and Mina.
ES415	
EF418	
EF618	
ES415	} Fallon Branch.
EF418	
EF420	

Trains handling cars containing Hazardous Material—Refer to Miscellaneous Item 1, All Subdivisions, and must not exceed 30 MPH between the following mile post locations:

Eastward:

Lovelock	MP 343.8 to MP 344.8
Winnemucca	MP 417.0 to MP 418.0
Wells	MP 607.0 to MP 608.0

Westward:

Wells	MP 608.0 to MP 607.0
Battle Mountain	MP 475.9 to MP 475.0
Winnemucca	MP 418.0 to MP 417.0
Lovelock	MP 344.8 to MP 343.8

Maximum authorized speed for freight trains is 55 MPH.

EXCEPTIONS:

- (a) Trains OAGF, RVNPP, RVOGP, OGOAT, RGMIA, RGOAT, UPMIA, UPSFF and UPWSA are authorized to operate at Column 1 speeds not exceeding 60 MPH provided train has no restricted cars or empties except cabooses and does not exceed 80 tons per operative brake and/or 120 cars.
- (b) Western Pacific Train OMW with no restricted cars or empties except caboose and not more than 70 tons per operative brake or 70 cars, is authorized to operate at Column 1 speeds not exceeding 60 MPH on the Southern Pacific's portion of the paired track between Alazon and Weso.
- (c) Western Pacific freight trains are authorized to operate at Column 1 speeds not exceeding 60 MPH provided train has no restricted cars or empties except cabooses and does not exceed 80 tons per operative brake and/or 120 cars except trains required to operate at column 2 speeds on WP will not exceed column 2 speeds on Southern Pacific track.
- (d) Train UPSFT with no restricted cars or empties, except caboose, consisting of not more than 50% multi-level equipment and not more than 80 tons per operative brake, is authorized to operate at Column 1 speed not exceeding 60 MPH.
- (e) Other trains may be authorized by train order to operate at Column One speeds not exceeding 60 MPH provided they contain no restricted cars, or empties except cabooses, and do not exceed 80 tons per operative brake and/or 120 cars.
- (f) Trains handling empties other than cabooses are restricted to 40 MPH between MP 308.0 and MP 309.0, between Upsal and Parran.
- (g) Eastward freight trains exceeding 5500 tons must not exceed 45 MPH between MP 645.4 and MP 660.0 between Cobre and Montello.
- (h) Eastward freight trains exceeding 7500 tons must not exceed 55 MPH between MP 672.0 and MP 674.0 between Tecoma and Lucin.

Speed on other than main track not to exceed 10 MPH

Exceptions:

Barth: Over Nevada Barth Co. track scales	3 MPH
Utah Ind. Pk. Spur Track & thru X-over	
DRGW Conn. MP 780.1	25 MPH

On Sidings & Turnouts at:

Patrick	10 MPH
Thisbe	20 MPH
Fernley	20 MPH
Darwin	20 MPH
Massie	20 MPH
Upsal	20 MPH
Parran	20 MPH
Ocala	20 MPH
Toy	20 MPH
Granite Point	20 MPH
Winnemucca	20 MPH
Moor	20 MPH
Moor (X-over)	25 MPH
Holborn	20 MPH
Pequop	25 MPH
Valley Pass	20 MPH
Valley Pass (X-over)	45 MPH
Pigeon	20 MPH
Jackson	20 MPH
Lemay	20 MPH
Groome	20 MPH
Hogup	20 MPH
Strongknob	20 MPH
Lakeside (X-over)	35 MPH
Tresend (E X-over)	20 MPH
Tresend (W X-over)	35 MPH
Midlake (Track No. 1)	10 MPH
Bridge (E & W X-over)	25 MPH

BETWEEN		ALL TRAINS	BETWEEN		ALL TRAINS
MP	MP		MP	MP	
MINA BRANCH					
HAZEN AND MINA:					
288.3 to 289.5		20			
289.5 to 301.1		40			
301.1 to 301.6		35			
301.6 to 302.9		40			
302.9 to 303.4		35			
303.4 to 317.1		40			
317.1 to 317.2		30			
317.2 to 318.1		40			
318.1 to 318.1		25			
318.1 to 319.2		40			
319.2 to 319.6		35			
319.6 to 324.7		40			
324.1 to 325.1		35			
325.1 to 328.0		40			
328.0 to 349.7		20			
349.7 to 349.8		15			
349.8 to 357.5		20			
357.5 to 361.5		35			
361.5 to 369.8		20			
369.8 to 371.1		25			
371.1 to 383.0		20			
383.0 to 415.4		25			
415.4 to 417.0		20			
FALLON BRANCH					
HAZEN AND FALLON:					
288.3 to 303.9				10	

RULES FOR MOVEMENT WITHIN THE OGDEN TERMINAL AREA

SP employes operating on tracks within the limits of the Ogden Terminal will be governed by SP rules and instructions insofar as they are not in conflict with the UP Rules or UP Special Rules contained herein.

UP RULE 7-C. All movements at 32nd St., Patterson Avenue and 29th St., are controlled by herders who will use yellow flag by day, yellow light by night.

Cecil Jct.: All movements are controlled by switch-tender. Trains or engines must call for Signal as per Rule 14(j) and must receive proceed signal, yellow flag by day, yellow light by night from switchtender before proceeding.

UP RULE 84. Amtrak trains will not depart passenger station without a signal from Amtrak representative.

UP RULE 98. Railroad crossings at Grade:

Grade Location	Railroad Crossings or Junction	How Governed
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21st Street . . .	DRGW main track crosses yard	Signal indication Rule 98.
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UP RULE 505. Light type signal No. 7812 located 600 feet west of crossover Drill Track No. 1 to SP eastward main track governs eastward movements on eastward main track. Dwarf light type signal displaying stop indication only, located opposite signal 7812 and affects eastward movement on westward main track, and trains may proceed past this signal without stopping after receiving a Proceed signal from switch-tender at Cecil Junction.

Signal No. 7813 located at east end of crossover east of Cecil Junction, dwarf light type signal displaying stop indication only located 300 feet east of DRGW crossing, dwarf signal No. 78135 located on west end of crossover Drill Track No. 1, to eastward SP main track. Top unit governs westward movements from SP freight yard to SP westward main track. Bottom unit governs northward movement from SP yard to Union Pacific (OSL) main track.

If signals fail to clear after switchtender has made proper line up, trains may proceed without stopping on signal from switchtender.

Crossover installed between 21st St. and DRGW crossing between the old running rail and Drill Track No. 1 (old SP main track) must be lined for normal movement and locked when not in use.

UP RULE 605. Eastward light type interlocking signal located 10 feet west of dual control switch in vicinity of MP 780.67. Top unit governs movements on eastward main track. Bottom unit governs movements to freight lead.

INTERLOCKING

RULE 606. Ogden: Limits extend on eastward main track from signal at MP 780.65 to MP 780.70 (310 feet).

DRGW Crossings at MP 781.40.

Westward interlocking signal governing westward movements on eastward track at Cecil Jct. and westward interlocking signal governing westward movements through power operated switch to eastward track at Cecil Jct. are equipped with switch key actuator start boxes. These signals will display proceed indication only when route is selected by Herder and the special switch key actuators are operated by a member of the train crew.

The switch key actuators are mounted on side of case on south side of track at signal location.

IN ADDITION, BEFORE MOVEMENT AGAINST CURRENT OF TRAFFIC IS MADE, PROTECTION MUST BE PROVIDED IN ACCORDANCE WITH PROVISIONS OF EITHER RULE D-160 OR RULE D-162.

UP RULE 663(c). Movements over DRGW main track at 21st St. are governed by signal indications. When a train or engine is stopped by signal governing movement over this crossing, and no conflicting movement is evident, a member of crew must be sent to the crossing to inspect derails on DRGW. If derails are in derailing position, train or engine may proceed on signal from employe at the crossing.

UP RULE 825. Train crews are responsible for applying sufficient hand brakes not less than five on descending end upon arrival Ogden, unless relieved by yardmaster.

Speed on other than main track not to exceed . . . 10 MPH

Exceptions:

SP Diesel Pit and shop limits 8 MPH

Current Union Pacific bulletin orders will be posted on SP bulletin boards and the following UP Rules and Special Rules will apply:

UP Special RULE 93. Trains and engines using Drill 1, Drill 2 or Drill 3 between 29th St. and 32nd St. will move at restricted speed approaching these crossovers, stopping if necessary for conflicting moves. Trains and engines from the west moving into passenger station must use SP westward track via UP new North Running Rail to depot tracks 1, 2, 3 and 4.

UP Special RULE 96. At Riverdale, between dual control switch locations at MP 989.6 and dual control switch located at MP 988.6, train and engine movements may be made in either direction on either track on signal indication or instructions from yardmaster 30th St., Ogden. When eastward movement on westward main track is authorized by signal indication beyond MP 988.6, movement may be made to MP 986.9 without being proceeded by a flagman.

Westward automatic block signal at MP 986.9 is a stop signal (Rule 240-A). Rule 509 governs.

UP Special RULE 104. Yardmasters may authorize trains to move through Patterson Ave. area without receiving signal from herder.

GENERAL DESCRIPTION OF SIGNALS

Block signals and interlocking signals are of the color light type. Their aspects are shown by lights of the prescribed color as viewed from an approaching train and may be qualified by flashing of lights, or by number plate or letter plate.

Block and interlocking signals, as far as practicable, are located adjacent to or directly over the track which they govern.

Two signals may be bracketed and located on one supporting mast for displaying indications on two tracks, right hand signal governing right hand track and left hand signal the left hand track.

When a track intervenes between a signal and track governed, a stub post with a blue light at night, will be placed to the right of the signal.

Unless otherwise indicated, where two or more signals are located on the same mast, the upper signal will govern main route and the lower signal or signals will govern diverging route or routes.

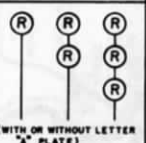
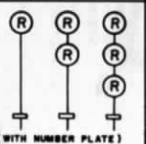

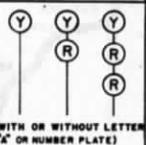
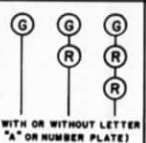
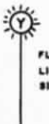
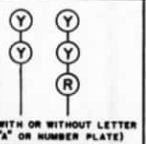
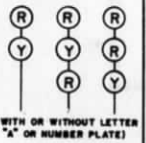
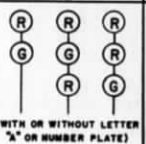
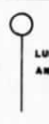
At locations where one-unit or two-unit signal, located on signal bridge or mast, is accompanied by a dwarf signal at the same location governing movements on the same track in the same direction, such dwarf signal is to be regarded as the lower unit of a two-unit or three-unit signal.

Block and Interlocking Signal Indication

Aspects shown in Rules 240C through 240N may be displayed on signals with or without a number plate on the signal mast.

Following symbols are used in diagrams of signal aspects:

To indicate number plate ; To indicate flashing light 
 R signifies Red; Y signifies Yellow; G signifies Green

RULE	ASPECTS	NAME	INDICATION
240 A	 (WITH OR WITHOUT LETTER "A" PLATE)	Stop	Stop before any part of train or engine passes the signal.
240 B	 (WITH NUMBER PLATE)	Stop and proceed	Stop before any part of train or engine passes the signal then proceed at restricted speed through entire block.
240 C	 FLASHING RED LIGHT ON ANY SIGNAL	Flashing stop and proceed	Stop before any part of train or engine passes the signal. Block occupied. Proceed at restricted speed.
240 D	 (WITH OR WITHOUT LETTER "A" OR NUMBER PLATE)	Approach	Proceed prepared to stop before any part of train or engine passes the next signal. Trains exceeding 30 MPH must immediately reduce to that speed.
240 E	 (WITH OR WITHOUT LETTER "A" OR NUMBER PLATE)	Clear	Proceed.
240 F	 FLASHING YELLOW LIGHT ON ANY SIGNAL	Approach limited	Proceed. Speed passing next signal must not exceed 40 MPH.
240 G	 (WITH OR WITHOUT LETTER "A" OR NUMBER PLATE)	Approach diverging	Approach next signal prepared to proceed on diverging route at prescribed speed.
240 L	 (WITH OR WITHOUT LETTER "A" OR NUMBER PLATE)	Diverging approach	Proceed on diverging route prepared to stop at next signal. Prescribed speed through turn-out. Trains exceeding 30 MPH must immediately reduce to that speed.
240 M	 (WITH OR WITHOUT LETTER "A" OR NUMBER PLATE)	Diverging clear	Proceed on diverging route. Prescribed speed through turn-out.
240 N	 LUNAR LIGHT ON ANY SIGNAL	Restricting	Proceed on route indicated at restricted speed.

Stop signals are designated by the absence of number plates and may also be marked by a plate bearing the letter "A."

Stop-and-proceed signals are designated by number plates.

Block signal numbers indicate their location approximately in miles and tenths according to mile posts. Signals governing eastward trains have even numbers and signals governing westward trains have odd numbers.

RULES GOVERNING OPPOSING AND FOLLOWING MOVEMENT OF TRAINS BY BLOCK SIGNALS

UP RULE 261. On portions of the railroad and on designated tracks so specified in the timetable, trains will be governed by block signals, whose indications will supersede the superiority of trains for both opposing and following movements on the same track.

UP Special RULE 261. Between absolute signals at Riverdale and Signal 9920, just east of Ogden Union Depot, Rule 261 is in effect on eastward track only. Cab signals will not indicate conditions ahead when moving west on eastward track.

A westward train stopped by Signal 9909 or 9915, or an eastward train stopped by signal 9920, 9916 or 9910 must communicate with yardmaster at 30th St., Ogden, and be governed by his instructions.

AUTOMATIC BLOCK SIGNAL SYSTEM RULES

UP RULE 505. Automatic block signals, cab signals, or both, govern the use of blocks but, unless otherwise provided, do not supersede the superiority of trains; nor dispense with the use or the observance of other signals whenever and wherever they may be required.

UP RULE 508. On any track signaled for traffic in both directions, block signals apply to trains in the direction of their movement on that track.

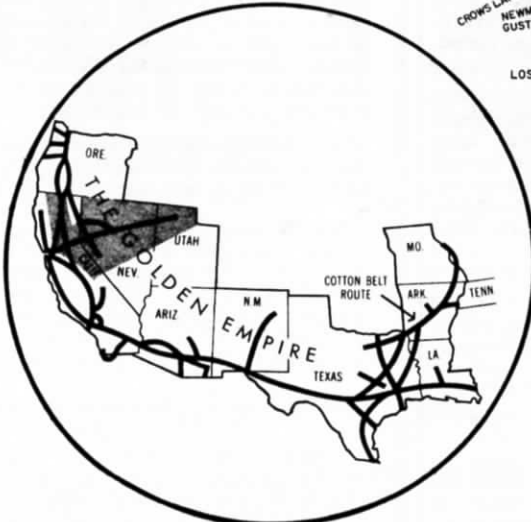
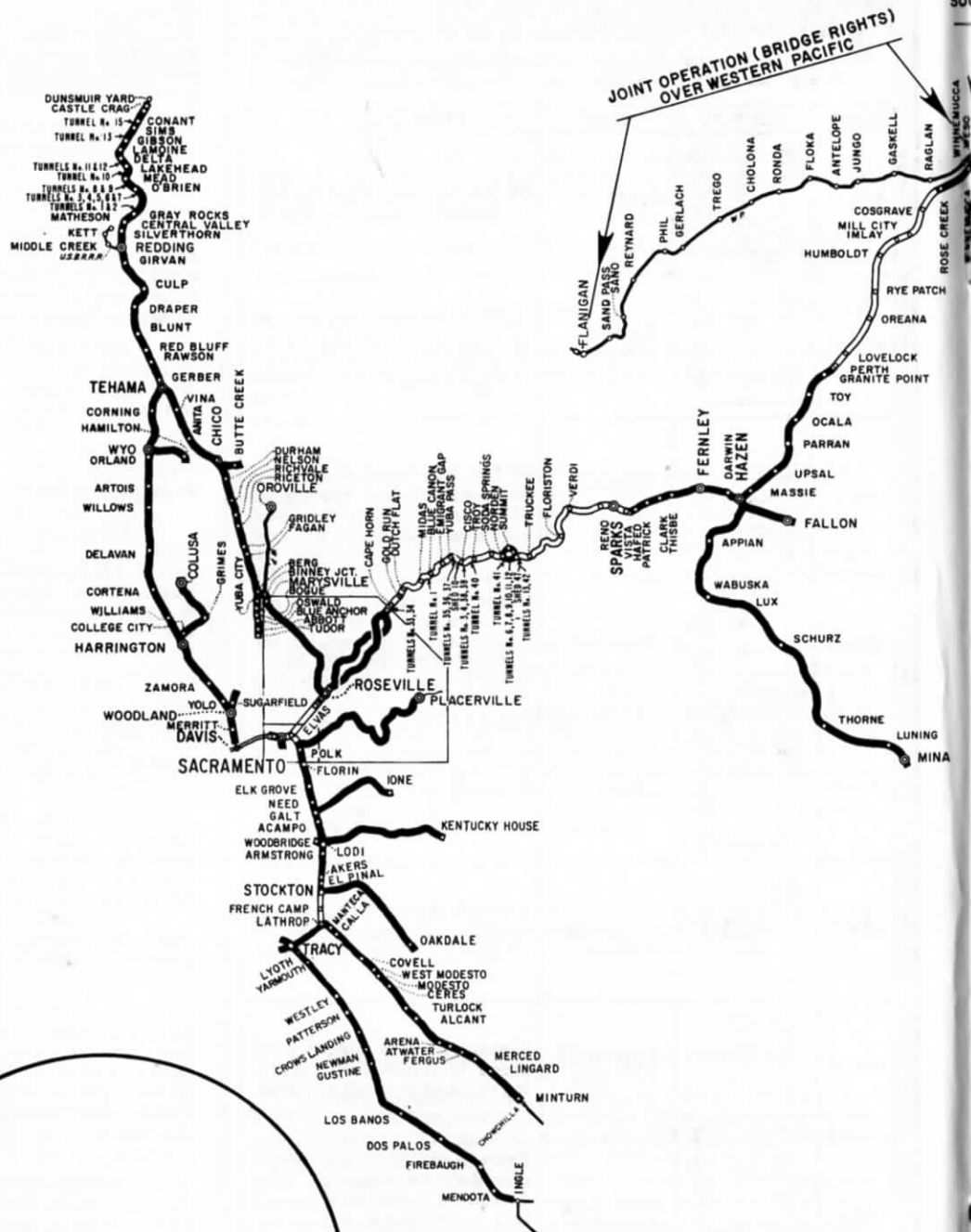
On any track signaled for traffic in one direction, block signals apply to trains moving with the current of traffic on that track.

UP RULE 509. When a train or engine is stopped by an automatic block signal indicating Stop, and such indication does not change promptly to a more favorable indication, a member of the crew must immediately communicate with the train dispatcher and be governed by his instructions.

When authorized by the train dispatcher to proceed, train or engine may, unless otherwise instructed, proceed at once at restricted speed to the next signal.

When communication with the train dispatcher is not available, or when so instructed by the train dispatcher, train or engine must be moved forward until leading wheels are 100 feet past the Stop signal, wait 10 minutes, and may then proceed at restricted speed to the next signal. If the track is seen to be clear of other trains or engines through to the next signal, and that signal displays Clear, Advance Approach or Approach, train or engine may proceed at restricted speed without waiting 10 minutes.

NOTE: Within yard limits of the Ogden Terminal area, movements on UP main track WITHIN BLOCK SYSTEM LIMITS must not exceed 35 MPH.



FIXED SIGNALS

Roseville: Westward freight trains and engines from Roseville Subdivision must stop clear of Berry St. crossing, MP 107.2 unless oral authority is received from herder or flashing white light is displayed in indicator just west of Berry St.

RULE P. LOCATION OF OVERHEAD AND SIDE STRUCTURES NOT STANDARD CLEARANCE ON MAIN TRACK AND SIDINGS

MP	Location	Description
88.54	Sacramento	Sacramento River bridge. Side and overhead
92.15	Elvas	American River bridge. Side

ROSEVILLE-SPARKS—No. 2 TRACK

111.21	East of Rocklin	Antelope Creek Bridge. Side
114.2	East of Rocklin	Tunnel No. 15. Side and overhead
114.7	East of Rocklin	Tunnel No. 16. Side and overhead
117.3	East of Rocklin	Tunnel No. 17. Side and overhead
120.5	East of Newcastle	Tunnel No. 18. Side and overhead
123.1	East of Newcastle	Tunnel No. 20. Side and overhead
124.6	East of Nevada St., Auburn	Tunnel No. 21. Side and overhead
131.2	East of Bowman	Tunnel No. 22. Side and overhead
132.7	East of Bowman	Tunnel No. 23. Side and overhead
132.9	East of Bowman	Tunnel No. 24. Side and overhead
133.1	East of Bowman	Tunnel No. 25. Side and overhead
133.3	East of Bowman	Tunnel No. 26. Side and overhead
133.8	East of Bowman	Tunnel No. 27. Side and overhead
134.8	East of Applegate	Tunnel No. 28. Side and overhead
135.9	East of Applegate	Tunnel No. 29. Side and overhead
138.7	East of Applegate	Tunnel No. 30. Side and overhead
139.2	East of Applegate	Tunnel No. 31. Side and overhead
139.4	East of Applegate	Tunnel No. 32. Side and overhead
164.34	East of Midas	Tunnel No. 1. Side and overhead
176.6	East of Emigrant Gap	Tunnel No. 35. Side and overhead
176.9	East of Emigrant Gap	Tunnel No. 36. Side and overhead
177.8	Crystal Lake	Tunnel No. 37. Side and overhead
177.87 to 198.91	Crystal Lake to Andover	Snow sheds and signals in Snowsheds. Side and overhead
180.5	East of Cisco	Tunnel No. 38. Side and overhead
180.7	East of Cisco	Tunnel No. 39. Overhead
185.3	East of Cisco	Tunnel No. 40. Side and overhead
193.3	East of Norden	Tunnel No. 41. Side and overhead
200.1	East of Shed 47	Tunnel No. 42. Side and overhead
180.38	East of Cisco	Signal Bridge No. 1804. Overhead
182.38	East of Cisco	Signal Bridge No. 1824. Overhead
184.02	East of Cisco	Signal Bridge No. 1844. Overhead
188.03	East of Troy	Signal Bridge No. 1880. Overhead
189.88	East of Troy	Signal Bridge No. 1900. Overhead
191.75	Norden	Signal Bridge No. 1919. Overhead
201.28	East of Andover	Signal Bridge. Overhead
209.12	East of Truckee	Signal Bridge No. 2096. Overhead
210.6	East of Truckee	Signal Bridge No. 2106. Side and overhead
212.63	East of Truckee	Signal Bridge No. 2124. Side and overhead
214.71	East of Truckee	Signal Bridge No. 2146. Side and overhead
218.05	East of Boca	Signal Bridge No. 2180. Side
220.03	East of Boca	Signal Bridge No. 2200. Side and overhead
221.88	East of Boca	Signal Bridge No. 2220. Side and overhead
230.12	East of Floriston	Signal Bridge No. 2300. Overhead
231.5	Verdi	Signal Bridge No. 2316. Side and overhead
237.02	Lawton	Signal Bridge No. 2370. Overhead
238.9	East of Lawton	Signal Bridge No. 2390. Side

SPARKS-ROSEVILLE—No. 1 TRACK

238.9	West of Reno	Signal Bridge No. 2389. Side
231.5	Verdi	Signal Bridge No. 2317. Side and overhead
230.12	West of Verdi	Signal Bridge No. 2301. Overhead
229.65	West of Verdi	3rd Truckee River Crossing. Side
221.88	West of Floriston	Signal Bridge No. 2219. Overhead
220.65	West of Floriston	1st Truckee River Crossing. Side
220.03	West of Floriston	Signal Bridge No. 2201. Side
218.26	West of Floriston	Highway Bridge. Overhead
218.05	West of Floriston	Signal Bridge No. 2181. Side
214.71	West of Boca	Signal Bridge No. 2147. Side and overhead
212.63	West of Boca	Signal Bridge No. 2125. Side and overhead
212.25	West of Boca	Highway Bridge. Overhead
210.6	West of Boca	Signal Bridge No. 2107. Overhead
209.12	West of Boca	Signal Bridge No. 2109. Overhead
207.55	West of Truckee	Signal Bridge No. 2075. Overhead
200.22	Andover	Tunnel No. 13. Side and overhead
198.91 to 177.87	Andover to Crystal Lake	Snowsheds and signals in snowsheds. Side and overhead
195.7	West of Shed 47	Tunnel No. 12. Side and overhead
195.2	West of Shed 47	Tunnel No. 11. Side and overhead
195.1	West of Shed 47	Tunnel No. 10. Side and overhead
194.9	West of Shed 47	Tunnel No. 9. Side and overhead
194.3	West of Shed 47	Tunnel No. 8. Side and overhead
194.25	West of Shed 47	Stone Wall. Side
194.1	West of Shed 47	Tunnel No. 7. Side and overhead
193.7	West of Shed 47	Tunnel No. 6. Side and overhead
191.75	West of Norden	Signal Bridge. Overhead

MP	Location	Description
189.88	West of Norden	Signal Bridge No. 1901. Overhead
184.4	West of Troy	Signal Bridge No. 1841. Overhead
182.38	West of Troy	Signal Bridge No. 1823. Overhead
181.0	West of Troy	Tunnel No. 4. Side
180.7	West of Troy	Tunnel No. 3. Side and overhead
180.38	Cisco	Signal Bridge No. 1803. Overhead
164.34	West of Blue Canon	Tunnel No. 1. Side and overhead
132.9 to 122.0	West of New England Mills to West of Auburn	Rock Cuts. Side
127.86	Bowman	Highway Bridge. Overhead
120.5	Newcastle	Tunnel No. 18. Side and overhead
111.21	East of Rocklin	Under Structure. Side and overhead

RULE 7-A. Yellow flags and unattended red flags, red lights and green flags must be respected when placed to the left of track between *MP 195.3 and MP 246.2.

*Mile post locations above are those shown for No. 2 Track.

RULE 7-C. Sacramento, Roseville and Sparks: Switchmen must use green flag by day and green light by night or oral authorization in giving proceed signals for movement of trains, **except at Roseville** proceed signal for movement to or from East Valley Subdivision a yellow flag by day and yellow light by night or oral authorization must be used.

Roseville: Eastward trains, except first class, must not leave unless proceed signal (green flag by day, green light by night) or oral authority received from switchman. Will not apply to eastward extra trains consisting exclusively of passenger equipment on continuous main track movement through Roseville.

Antelope: Westward trains and engines (except yard engines) using running track must not pass fouling point unless proceed signal received from switchman, green flag by day, green light by night, or oral authorization or signal received from trainman of the same crew.

RULE 10-J. Speed may be increased as soon as lead engine has passed increase speed sign at following locations:

Westward MP	Eastward MP
242.25	Reno
	244.2

Speed signs to right of track in current of traffic direction with one track intervening:

Westward	Reading	Eastward	Reading
MP 91.15	10	MP 106.88	35

Speed signs to left of track with one track intervening:

Westward	Reading	Eastward	Reading
*MP 245.2	20		

*Is located 1.10 miles instead of 2 miles from point of restriction.

Westward speed sign at MP 94.9 is 2.34 instead of 2 miles from point of restriction.

RULE 14(I). Westward trains will sound crossing whistle signal immediately after emerging from west portal of Tunnel Nos. 6 and 41, west of Eder.

RULE 81-A. Sacramento: Sacramento Northern trains preparing to enter SP tracks at 19th & B, or 22nd & B Sts., must contact SP yardmaster for permission to enter SP tracks. CCT trains preparing to enter SP tracks at 22nd St. must contact SP yardmaster. When CCT trains clear SP tracks at 22nd St. member of crew must advise SP yardmaster.

RULES 82-A and 221. Train orders and clearances issued on the Roseville Subdivision will apply on the Stockton Subdivision and vice versa.

Sacramento: Trains to Roseville Subdivision and operating through with same conductor and engineer may be issued clearance and/or train orders on Martinez Subdivision to apply on Roseville Subdivision, and will not obtain clearance at Sacramento.

Train No. 6 will assume schedule and operate to Antelope but must obtain a clearance at Antelope which must bear the "OK" time and initials of the Chief Train Dispatcher and be endorsed "GREEN" or "NO" signals as the case may be.

Antelope: Train No. 5 and trains consisting entirely of passenger equipment must obtain a clearance which must bear the "OK" time and initials of the Chief Train Dispatcher and be endorsed "GREEN" or "NO" signals as the case may be.

RULE 83-A. At the following stations, only the trains indicated will register:

Sacramento—Trains required by Rule S-240.

Roseville—All trains except first-class trains, extra trains consisting entirely of passenger equipment and not terminating at Roseville.

RULE 93. Yard limits are established at the following locations:

West MP	East MP
85.51 Sacramento	98.04
98.04 Roseville (Eastward and No. 2 Track)	110.87
98.04 Roseville (No. 1 and Westward Track)	110.87
140.03 Colfax	142.94
207.28 Truckee	209.09
231.63 Sparks	249.48

RULE D-97. Applies:

- Between Sacramento and Antelope, MP 103.14
- Between Roseville, MP 106.2, and Emigrant Gap, MP 171.87
- Between Truckee, MP 207.64, and Sparks.

RULE 98. Railroad crossings at grade not interlocked:

Sacramento: Switching and industry tracks in vicinity of Front and R Streets—Ascertain that each crossing is clear before using.

SNRy at Front and R Streets—Stop within 200 feet of crossing.

Roseville: Lead from yard to East Valley Subdivision main track crosses No. 2 Track and No. 1 Track of Roseville Subdivision near station sign. Eastward freight trains from yard to East Valley Subdivision will be governed by Signal 1062, and westward freight trains from East Valley Subdivision to enter yard will be governed by bottom unit of Signal 1063 before fouling or moving over No. 2 Track and No. 1 Track.

RULE 103. Trains and engines must stop and be preceded by flagman before crossing highways at:

Sacramento: Cantilever flashing light signals in service at Capitol Avenue crossing. Light type indicators located adjacent to crossing govern movement of trains and engines over Capitol Avenue. Green aspect indicates crossing gates and flashers have been actuated and movement may be made with caution. Red or dark aspect indicates stop.

Antelope: Crossing gate key control installed at "U" Street to actuate gates when backup movements made from westward main track.

Roseville: Eastward trains stopping within 400 feet of Yosemite Street crossing, when starting must not exceed 10 MPH until engine enters crossing.

Truckee: Westward trains must stop east of Signal 2083 to avoid unnecessary operation of automatic warning device at Bridge Street.

At the following stations there are crossing gates which are not actuated when trains are stopping at station to receive or discharge traffic until train starts to move toward crossing, and speed of 10 MPH must not be exceeded until gates are down:

Station	Location	Direction	MP
Reno	Sierra St.	Westward	242.8
Reno	Virginia St.	Westward	243.0
Reno	Center St.	Westward	243.1

Locations at which train must stop to avoid unnecessary operation of crossing gates while receiving or discharging traffic:

Station	Location	Direction
Reno	60 ft. east of Center St.	Westward
Reno	230 ft. east of Virginia St.	Westward
Reno	60 ft. east of Virginia St.	Westward

RULE 107. Station train indicator provided in approach to following station:

Westward:

Reno: On signal bridge with Signal 2437

When illuminated this indicator will convey the following information:

- TRAIN**—Train at platform on opposite track.
- CLEAR**—Indicator in service.

When neither TRAIN nor CLEAR is illuminated indicator is out of service and prompt report must be made to Chief Train Dispatcher.

RULE D-151. Double track rules apply on Track Nos. 1 and 2 between the following locations:

- Roseville, MP 106.2, and Emigrant Gap, MP 171.87
- Truckee, MP 207.64, and Sparks.

Main tracks between Roseville and Sparks are designated: No. 1 track current of traffic westward.

No. 2 track current of traffic eastward.

And unless otherwise authorized will be used as double track.

RULE D-161. Antelope: Switchman's proceed signal, green and white flag by day, green and white light by night, will be an indication that protection has been provided for movement against current of traffic within yard limits on eastward main track.

RULE 221. Antelope: Is a train order office for regular trains and trains consisting entirely of passenger equipment.

Roseville: First class trains and trains consisting entirely of passenger equipment not terminating at Roseville are not required to obtain a clearance at Roseville.

Colfax: Is a train order office for trains originating only, between 6:30 AM and 3:30 PM daily, except Saturdays, Sundays and Holidays.

Norden: Train-order signal located to the right of No. 2 track will apply to eastward trains on No. 2 track only.

Train-order signal installed to the left of No. 1 track will apply to eastward trains on No. 1 track only.

RULE D-251. Applies:

- Between Sacramento and Antelope, MP 103.14.
- Between Roseville and Emigrant Gap.
- Between Truckee and Sparks.

RULE 306. The following home signals, equipped with triangular plate displaying the letter "P," have included in their control limits some special protective device. Interlocking signals are listed as "P-I."

Eastward Signal	Protection	Westward Signal
	*Spring switch, Sacto-Yolo Port Dist. conn.	P-I
	Spring switch, end double track, MP 103.14, Antelope	P-I
P-994	Collision barricade detector, MP 99.9	P-1009
P-1228	Slide detector fence, Tunnel 20, MP 123.15 to 123.39	
	Collision barricade detector, MP 124.7	P-1251
P-1242	Collision detector, highway underpass, MP 125.53	
	Collision detector, highway underpass, MP 133.35	P-1347

SPECIAL INSTRUCTIONS—ROSEVILLE SUBDIVISION

Eastward Signal	Protection	Westward Signal
P-1374	Collision detector, highway underpass, MP 137.68	
P-1438	Slide detector fence, MP 144.46 to 144.66	
P-1508	Slide detector fence, MP 150.83	P-1515
P-1556	Slide detector fence, MP 156.32 to MP 156.38	P-1573
P-1582	Slide detector fence, MP 159.43 to MP 159.46	P-1611
P-I	Slide detector fence, MP 195.6 to MP 195.7, No. 1 Track	P-1963
P-2220	Slide detector fence, MP 222.16 to MP 222.34	
	Slide detector fences, MP 223.87 to MP 223.8	P-2239
	MP 222.88 to MP 222.77	
	MP 222.34 to MP 222.16	
P-2240	Slide detector fence, MP 224.5 to MP 223.8	P-2259

*If switch point indicator displays green aspect movement to Port District may proceed at restricted speed without hand throwing spring switch.

When signals with triangular plate bearing letter "P" display stop indication in connection with slide detector fences at MP 222.16 to MP 222.34; MP 223.87 to MP 223.8; MP 222.88 to MP 222.77; MP 222.34 to MP 222.16 and MP 224.5 to MP 223.8, inspection of track and structure may be made from engine.

AUTOMATIC BLOCK SIGNAL SYSTEM

RULE 505. Sacramento: Push button and indication lights are installed in box on Signal Case near Signals 887 and 889. Signal 887 or 889 may be cleared by operation of push button bearing number of signal.

Roseville: Westward freight trains and engines, except yard engines, or trains consisting entirely of passenger equipment, when making continuous movement on main track must not pass Signal 1065 unless proceed signal or oral authorization is received from switchman.

Movement of trains in both directions between eastward Signals 1060 and 1064 and westward Signals 1065 and 1067 on Roseville Subdivision and between eastward Signals 1062 and 1064 and westward Signal 1063 on East Valley Subdivision will be governed by signal indication which will supersede the superiority of trains, but movements must be made with caution, and only after block signal indicating proceed is displayed as prescribed below:

Signal 1064 on Track No. 1 governs eastward movement as follows:

- Top Unit To No. 1 Track
- Bottom Unit East Valley Line

Eastward movement on No. 2 Track is governed by Signal 1060.

Signal 1065 governs westward movement as follows:

- Top Unit To No. 1 Track
- Bottom Unit Thru crossover to No. 2 Track

Signal 1063 on East Valley Line governs movement as follows:

- Top Unit To Jct. switch to No. 1 Track
- Bottom Unit Across No. 1 and No. 2 Tracks to yard tracks

Signal 1062 on east drill track governs movement to East Valley Subdivision only.

Trains stopped by Signals 1060, 1062, 1063, 1064, 1065 or 1067 must not proceed until signal displays proceed indication, except may proceed after stopping if proceed signal or oral authorization is received from switchman, movement to be made with caution.

Sparks: Eastward freight trains, except OAGF, must stop before passing Signal 2452 unless proceed signal is received from switchman or orally authorized. If proceed signal is received from switchman or orally authorized and signal displays stop indication, movement may be made as prescribed by Rule 507.

RULE 507. Roseville: Eastward trains leaving via drill track must not pass Signal 1072 displaying stop indication without contacting switchman orally.

Eastward freight trains leaving via No. 2 Track must not pass Signal 1074 displaying stop indication without contacting switchman orally.

RULE 509. Roseville: Westward freight trains and engines from Roseville Subdivision, after receiving proceed signal or oral authorization from switchman, may pass Signal 1065 displaying stop indication without stopping when movement is to be made into yard tracks.

SPRING SWITCHES

RULE 538. Spring switches equipped with facing point locks are located as follows:

Station	Location	Normal Position
Antelope	End of double track (MP 103.14)	Westward Track

Spring switches not equipped with facing point locks are located as follows:

Station	Location	Normal Position
*Sacramento	Sacto-Yolo Port Conn.	Sacto-Yolo Port Dist.
Sacramento	#7 Amtrak Lead	Westward main track
*Roseville	East end east drill track	No. 2 Track
Roseville	East end Big Reno	East drill track
*Gold Run	East end eastward siding	No. 2 Track

*Equipped with switch-point indicator.

RULE 540. Roseville: Switch point indicator located to left of westward main track adjacent to movable point frog applies to westward trains or engines on westward main track. Westward trains and engines on westward main track to Antelope must not pass red aspect of switch point until switchman or yardmaster notified and position of switches are rechecked for proper position and authority received from switchman to proceed.

INTERLOCKING

RULE 606. Sacramento River Drawbridge: Westward Limits extend between MP 88.7 and MP 88.2; Eastward Limits extend between MP 87.9 and MP 88.6. Telephones are located adjacent to Signals 887, 889 and interlocking signals west end of drawbridge, east end of drawbridge and interlocking signal approaching main track from Port District. Sacramento River Drawbridge Ext. 339, Elvas Ext. 295.

Nineteenth Street, Sacramento: At crossing of R Street Track with WP.

Movements across WP main track are under control of WP train dispatcher who will control signals which govern movement but do not indicate occupancy of track. Upon receiving permission from WP Train Dispatcher, movements across WP main line must be made under provisions of Rule 663.

Telephones located in boxes at following locations:

West leg of WP wye track and R Street.

Steel relay shelter just south of crossing.

Elvas: Limits extend on Sacramento-Roseville line from interlocking signal 1800 feet west of tower to interlocking signal, 1370 feet east of tower.

Interlocking signals governing movements against the current of traffic on the eastward and westward main tracks are equipped with Switch Key Actuator Start Boxes. Permission must be obtained from operator Elvas before switch key is inserted in start box. Signal will not clear until switch key actuator is operated. **IN ADDITION, BEFORE MOVEMENT AGAINST CURRENT OF TRAFFIC IS MADE, PROTECTION MUST BE PROVIDED IN ACCORDANCE WITH PROVISIONS OF EITHER RULE D-160 OR RULE D-162.**

SPECIAL INSTRUCTIONS—ROSEVILLE SUBDIVISION

Colfax West end sidings.
 Gold Run (West end siding.
 Towle West end set-out spur.
 Midas Spur track.
 Emigrant Gap East & west end spurs.
 Norden West end siding.
 Summit (Train order delivery post.
 Truckee No. 1 turntable lead.
 Verdi Spur track.
 Refer to Rule 825, All Subdivisions.

RULE 827. DRAGGING AND / OR DERAILED EQUIPMENT DETECTOR AND INDICATOR INSTALLED AT THE FOLLOWING LOCATIONS:

Location	Signal	Protects Direction(s)	On Track
At Signal	995	Both	#1
110.2	On Hot Box Detector Equipment House	Both	#1
At Signal	1168	Both	#2
At Signal	1187	Both	#1
At Signal	1214	Both	#2
At Signal	1219	Both	#1
At Signal	1258	Both	#2
At Signal	1277	Both	#1
Mile Post	131.2	Both	#1
At Signal	1374	Both	#2
At Signal	1452	Both	#2
Mile Post	145.6	Both	#1
Mile Post	150.0	Both	#2
Mile Post	150.4	Both	#1
At Signal	1546	Both	#2
Mile Post	155.1	Both	#1
At Signal	1582	Both	#2
At Signal	1591	Both	#1
At Signal	1630	Both	#2
At Signal	1635	Both	#1
At Signal	1668	Both	#2
At Signal	1687	Both	#1
At Signal	1698	Both	#2
At Signal	1735	Both	#1
At Signal	1737	Both	#2
On Signal	1756	Both	#2
On Signal	1757	Both	#1
At Signal	1775	Both	#1
At Signal	1776	Both	#2
At Signal	1803	Both	#1
At Signal	1804	Both	#2
On Signal	1823	Both	#1
On Signal	1824	Both	#2
On Signal	1900	Both	#2
On Signal	1901	Both	#1
Mile Post	193.3	Both	#1
At Signal	1941	Both	#1
Mile Post	195.0	Both	#1
Mile Post	195.3	Both	#2
At Signal	1958	Both	#1
At Signal	2004	Both	#1
At Signal	2005	Both	#2
On Signal	2023	Both	#1
On Signal	2024	Both	#2
On Signal	2039	Both	#1
On Signal	2040	Both	#2
At Signal	2057	Both	#2
At Signal	2060	Both	#1
At Signal	2107	Both	#1
On Signal	2124	Both	#2
On Signal	2125	Both	#1
On Signal	2180	Both	#2
On Signal	2201	Both	#1
At Signal	2239	Both	#1
At Signal	2280	Both	#2
At Signal	2350	Both	#2
At Signal	2351	Both	#1
Mile Post	240.0	Both	#2
Mile Post	240.0	Both	#1

HOT BOX DETECTORS

SCANNER SITE

MP	Type	Direction(s)	Location
98.3	D	East	Planehaven
110.2	D	West	Rocklin
148.6	C	Both No. 2 Track	Magra
143.5	C	West	Colfax-Cape Horn
240.0	C	Both	West Reno

Refer to Rule 827, All Subdivisions.

RULE 827-A. Sacramento & Elvas: Trains handling cars containing Class A Explosives, Radioactive material, or tank cars containing Acrylonitrile, Anhydrous Ammonia, Chlorine, Hydrofluoric Acid, Poison Gas, or Flammable Gas (FG) must be given a rolling inspection by outbound train crew unless otherwise instructed.

RULE 834-A. Sacramento: Excess width or height loads must not be operated on Sacramento Passenger Station Track 4. Employees must not ride on top or side of engines or cars on Track 4.

RULE 837. Roseville: Flashing white light installed west of electrically operated switch on Tracks 21-25. Eastward movements, except yard engines, must not be made from Track 21 unless switch is lined and flashing white light is displayed or movement is orally authorized.

Westward trains and engines (except yard engines) using running track must not pass fouling point at west end in vicinity of Dry Creek unless proceed signal received from switchman, yellow flag by day, yellow light by night, or oral authorization or signal received from trainman of the same crew.

Antelope: Eastward trains entering yard track must not pass interlocking office unless proceed signal or oral authorization received from switchman.

RULE 845. Roseville: Conductor will be responsible for ascertaining when his train is made up. He will then instruct his crew to proceed to make-up track to prepare train for departure.

RULE 872. Roseville Diesel Facility, Sacramento and Sparks: Enginemen taking charge of road engines will consider engines as having been amply supplied with water, fuel, sand and other supplies.

AIR BRAKE RULES

RULE 2, A. Taking Charge of Engines.

Will apply at:
 Roseville, Sacramento and Sparks.

FREIGHT TRAINS

RULE 17. Retaining valves must be used on descending grades as follows:

Norden to Truckee-Norden to Loomis.

WITHOUT DYNAMIC BRAKE IN OPERATION:

One retaining valve for each 80 tons in train. If gross tonnage exceeds 80 tons per operative brake, retaining valves must be used on all cars and speed must not exceed 15 MPH.

Freight trains must not exceed 20 MPH (westward) from MP 192.1 (Norden) to MP 113.26 (Loomis) and (eastward) from MP 192.0 (Norden) to MP 209.1 (Truckee) when retaining valves required in accordance with Air Brake Rule 17.

WITH DYNAMIC BRAKE IN OPERATION:

	Permissible Tons Per Unit Without Retaining Valve			
	Basic-Dynamic Brake		Extended Range Dynamic Brake	
	4 Axle	6 Axle	4 Axle	6 Axle

With dynamic brake in operation but without pressure maintaining system of braking:

Norden to Truckee	650	940	800	1200
Norden to Loomis	450	650	550	850

With dynamic brake in operation and with pressure maintaining system of braking:

Norden to Truckee	1800	2700	2300	3500
Norden to Loomis	1400	2100	1700	2600

If permissible tonnage is exceeded, one retaining valve must be used for each 150 tons in excess thereof.

Freight trains without dynamic brakes in operation will stop at the following stations for at least 10 minutes for wheel heat radiation:

Eastward	Westward
MP 203.0	Troy
	Emigrant Gap
	Midas
	Gold Run
	Bowman

Train inspection must be made as prescribed by Rule 827 at all wheel heat radiation stops.

Refer to Air Brake Rule 17, All Subdivisions.

RULE 24. Will apply at Roseville.

RULE 24-E. Will apply to trains arriving Roseville.

RULE 24-G. Will apply at Sparks.

RULE 25. Will apply at Norden when required to stop and make train air brake test at that point, except:

Rule 25-A. Will apply at Crystal Lake eastward or approaching MP 209.2 Westward.

Rule 25-B. Will apply to westward freight trains immediately after rear of train leaves portal of Tunnel 6 or 41 and before reaching station at Norden, and to eastward freight trains immediately after engine passes station at Norden and before engine enters west portal of Tunnel 6 or 41.

If unable to comply with Rules 25-A and/or 25-B, Rule 25 applies.

RULE 33. Norden to Truckee, Boca to Floriston, Verdi to Lawton, Norden to Rocklin.

MAXIMUM TONS PER OPERATIVE BRAKE . . . 80 TONS

Restrictive grades are as follows:

Eastward	MP to	MP	MPH
Norden to Truckee	192.8	210.0	20
Boca to Floriston	219.0	224.0	25
Verdi to Lawton	229.5	240.0	25
Westward			
Norden to Colfax	193.6	143.6	20
West of Colfax	142.0	138.3	25
West of Colfax to East of Loomis	136.5	115.0	20
East of Loomis to Rocklin	115.0	111.3	25

Exceptions:

1. Trains with not more than 425 tons per axle of dynamic brake, pressure maintaining system of braking in operation and speed not exceeding 25 miles per hour.

MAXIMUM TONS PER OPERATIVE BRAKE . 100 TONS

2. Trains with not more than 250 tons per axle of dynamic brake, pressure maintaining system of braking in operation, not more than 90 cars and speed not exceeding 25 miles per hour:
MAXIMUM TONS PER OPERATIVE BRAKE . . 130 TONS

3. Trains with not more than 300 tons per axle of dynamic brake, pressure maintaining system of braking in operation, not more than 90 cars and speed not exceeding 20 miles per hour:
MAXIMUM TONS PER OPERATIVE BRAKE . . 130 TONS

Norden to Truckee, Norden to Rocklin

Insufficient dynamic brake capacity or failure of dynamic brake which results in exceeding these tonnages per axle, is to be considered as operating without dynamic brake.

Should dynamic brake failure occur or partial failure of dynamic braking occur resulting in insufficient dynamic brake capacity, train is to be considered as operating without any dynamic brake. Trains must stop and all retaining valves turned up. Train may then proceed not exceeding 15 MPH if, in the judgment of the conductor and engineer, it is safe to do so.

PASSENGER TRAINS

RULE 17. Norden to Truckee-Norden to Loomis:

Without dynamic brake in operation turn up all accessible retaining valves.

RULE 39. Running test must be made on eastward passenger trains in the vicinity of MP 191.0 approaching Norden.

Running test must be made on westward passenger trains just after emerging from Tunnel No. 41 on No. 2 Track; or, in the vicinity of MP 196.7, where No. 1 Track crosses east portal of Tunnel No. 41 on the No. 1 Track.

MISCELLANEOUS

1. Sacramento: Communicating signal or oral communication from trainmen will be used to start passenger train at Sacramento.

2. Engines listed must not operate on tracks shown below:

Class of Engine	Restricted Tracks
-----------------	-------------------

All engines Newcastle—Over trestle portion of fruit spurs.
All engines Summit—Lumber spurs Nos. 3 and 4 beyond derail.

All except AS 409, ES 406, 409, 415 } { Reno—All industry tracks north of eastward main track between Park class } { St. and WP interchange.

3. LOAD LIMIT (car and contents):

*Sacramento-Sparks 315,000 pounds
Sacramento-Brighton via R St. 240,000 pounds
Unless authorized by Superintendent, heavier loads must not be handled.

*Refer to All Subdivisions, Page 20, Miscellaneous Item No. 14.

4. OPERATION OF TURNTABLES

Norden: Turntable equipped with rail locks each end. Before moving onto table from any lead, table must be lined so engine will enter from locked end only. Engines when backing and approaching table from lead from eastward siding, will stop to clear table and member of crew after properly lining and locking table will signal engineer to move onto table by green light controlled by pushing button located on post of turntable shed on engineer's side. This signal does not indicate position of turntable or turntable lock. Engines leaving turntable will leave from locked end. In making movements to or from turntable it will not be necessary to lock opposite end of table.

Turntable must not be moved until engineer signals fireman engine is properly spotted and brakes applied.

Engineer or member of crew, preferably engineer, must remain in the cab of engine at all times when engines are being turned at Norden.

5. Balloon track at MP 169.16, west of Emigrant Gap, diverging from No. 1 Track. Crossover between main tracks located at east end of balloon track at MP 169.55. Engines and equipment will enter balloon track at west switch and leave balloon track at east switch.

6. Sacramento: Operation over SNRy: Rail connection to the Yolo Port in Sacramento Yard from the clearance point at Washington to the Port Railroad connection at Riske Lane is used jointly by SNRy and SP crews. Movement on joint track governed by block signals whose indications supersede the superiority of trains.

Block indicators located at switches indicate track occupancy.

When block indicator shows block clear, switch may be reversed and movement made after block signal displays a yellow aspect.

If block indicator shows block occupied, switch must not be reversed until it has been ascertained that there is no opposing or conflicting movement.

If after switch has been reversed signal displays stop indication, train or engine must wait five minutes and then be preceded by flagman through joint track area.

Maximum speed permitted on joint track is 10 MPH and all movements must be made with caution.

Normal position of switches connecting with joint track is as follows:

SNRY Woodland Branch connection just west of West Capitol Ave. underpass lined for Yolo Port Railroad.

East wye switch SNRy Woodland Branch for movement west leg of wye.

Sacramento Yolo Port Railroad connection just east of county road crossing for SNRy west leg of wye.

Sacramento Yolo Port Railroad yard tracks are used jointly by SNRy and SP crews and all movements must be made with caution not exceeding 10 MPH.

Flag protection to the rear is not required when operating in joint track area or over Sacramento Yolo Port Railroad yard tracks.

7. Air flow curtain installed East portal tunnel No. 28, MP 135.36, No. 2 track, Applegate.

Curtain is designed to actuate and close only if speed of train is 20 MPH or less when passing MP 134.1. Under above conditions train must not increase speed in excess of 20 MPH after passing MP 134.1 until engine passes East portal of tunnel No. 28, MP 135.36.

Air flow curtain installed west portal Tunnel No. 41, MP 193.3, No. 2 Track, Norden.

Curtain is designed to actuate and close only if speed of train is 20 MPH or less when passing westward Signal 1965, No. 2 Track, Eder.

Under above conditions train must not increase speed in excess of 20 MPH after passing Signal 1965 until engine passes west portal of Tunnel No. 41, MP 193.3.

8. Roseville Diesel Service Facilities:

Westward movement must not be made over power operated switches on inbound lead unless movement is orally authorized by yardmaster or his representative.

Tracks 3 to 5 inclusive are equipped with electro-pneumatic controlled switches and switch point indicators. Indicators do not indicate track occupancy, but will display green aspect

when switch is in normal position and yellow aspect when switch is in reverse position. When indicator light is not lighted, careful examination of switch must be made before making movement over switch.

Service lead from subway to oil, sandhouse and diesel facilities has stop sign located at fouling point of inbound lead to receiving tracks. After stopping it will be permissible to proceed if route is clear.

Switch position indicator located at:

Roseville Switch in westward running track.

Indicator does not indicate track occupancy but when displaying red, yellow or green aspects following will govern:

Red aspect Inoperative.
 Yellow aspect Switch lined for yard receiving unit.
 Green aspect Switch lined for running track Antelope.

Stop signs with reflective background are located on eastward yard running Track No. 21 between Antelope and Roseville. Instructions governing movement past each sign as follows:

West of Dry Creek Subway.
 East end Track No. 21.

Stop must be made unless proceed signal received from switchman or orally authorized by yardmaster or his representative or when yard engine is accompanied by yard crew.

9. ROSEVILLE HUMPS MOVEMENTS

Light signals which govern hump movements located as follows:

South Hump At crest to right of track.
 North Hump At crest to left of track.

Light signals which repeat the aspect of hump signals located as follows:

South Hump To left of south lead track, west of manual crossover.
 North Hump To left of north lead track, west of manual crossover.

When crossovers west of crest are lined normal, the south hump repeater will repeat the aspect of the south hump signal, and the north hump repeater will repeat the aspect of the north hump signal.

When crossover west of crest is lined for movement from south receiving tracks to north hump, the south hump repeater signal will repeat the aspect of the north hump signal.

When crossover of crest is lined for movement from north receiving tracks to south hump, the north hump repeater signal will repeat the south hump signal.

These light signals do not indicate track occupancy or position of switches, but when displaying red, flashing red, yellow or green aspect, following will govern:

Aspect	Indication
Red	Stop
Flashing Red	Back
Yellow	Proceed at normal hump speed
Green	Proceed

For eastward movement of cars from receiving yard to crest, hump and repeater signals must display yellow or green aspect and in addition engineer instructed to move either orally or by hand or lamp signals by yardmaster or his representative in charge of movement.

Movement of cars toward crest of hump must not be made past repeater signal displaying red aspect unless engineer is orally informed by yardmaster or his representative that protection has been provided to safeguard the movement. Yardmaster before authorizing such a movement must know that crossovers west of crest are properly lined for such a movement and that humping movements from opposite hump through diamond crossover east of crest are stopped.

Movement of cars toward crest of hump when repeater signal displays red aspect may be authorized by yardmaster or his representative as far as the lead carman's tower.

Light signals which govern trim movements from bowl are located as follows:

South Hump At crest to left of track.
North Hump At crest to right of track.

Light signals which repeat the aspect of the trim signals are located as follows:

South Hump No. 1 repeater to left of track near 22-49 Switch Tower A-B. No. 2 repeater between leads at 36-42 and 43-46 switches.
North Hump No. 1 repeater to right of track near switch 1-21. No. 2 repeater to right of track near switch 1-7.

These light signals do not indicate track occupancy or position of switches but when displaying red or yellow aspect, following will govern:

Aspect	Indication
Red	Stop
Yellow	Proceed

For westward movement from bowl tracks to crest, trim and repeater signals must display a yellow aspect, and in addition engineer instructed to move either orally or by hand or lamp signals by switchman in charge of movement. Movement must not be made west of fouling point of bowl tracks when trim and repeater signals display red aspect unless engineer is orally informed by yardmaster or his representative that movement is protected. Yardmaster authorizing such movement must insure that any conflicting movements are stopped.

Switch point indicators are provided on all power operated switches at west end of bowl. Westward movement must not be made to foul lead or any track diverging from lead unless switch is seen to be lined for the movement.

Tracks 23, 24 and 25 equipped with electrically controlled switches and switch point indicators. Indicators do not indicate track occupancy, but will display green aspect when switch is in normal position and yellow aspect when switch is in reverse position. When indicator lamp is not lighted, switch points must be checked to determine proper position before making movement over switch.

Trains or engines, except yard engines, must not enter tracks 23, 24 or 25 unless a proceed signal is received, green flag by day, green light by night, or engineer is orally authorized. When proceed signal received, or orally authorized, train or engine may proceed into track lined for movement.

Eastward movements from tracks 23, 24 and 25 are governed by indicator light located adjacent to No. 23 track switch.

Eastward movements, except yard engines, must not be made from tracks 23, 24 or 25 unless switches are lined and flashing white light is displayed or movement is orally authorized.

Westward movements, except yard engines, must not be made from tracks 23, 24 or 25 unless proceed signal received, green flag by day, green light by night or orally authorized.

Flashing white light located west of electrically operated switch on Tracks 21-25. Eastward movements, except yard engines, must not be made from Track 21 unless switch is lined and flashing white light is displayed or movement is orally authorized.

SPEED RESTRICTIONS FOR TRAINS

Refer to Miscellaneous Item 1, All Subdivisions. Speed must be further reduced as prescribed by speed signs, except as specifically authorized by Special Instructions herein, or by Timetable Bulletin.

EASTWARD			PSGR TRAINS	FRT	WESTWARD			PSGR TRAINS	FRT
MP	MP	Column:	1	2	MP	MP	Column:	1	2
SACRAMENTO to SPARKS:					SPARKS to SACRAMENTO:				
88.5	to 89.2	...	10	10	246.2	to 244.16*	...	30	30
89.20	to 90.0	...	25	25	244.16	to 242.2*	...		
90.0	to 91.6	...	35	35	(Reno)	...	20	20	
91.61	to 92.56	...			242.2	to 224.0*	...	45	45
(interlocking and bridge)	...		25	25	224.0	to 208.0*	...	40	40
92.56	to 93.0	...	50	50	208.0	to 194.0*	...	30	30
93.0	to 102.5	...	70	55	194.0	to 115.1*	...	30	25
102.5	to 103.1	...	35	35	115.1	to 108.1*	...	40	40
103.1	to 106.08	...	45	45	108.1	to 106.7*	...	35	30
106.08	to 106.7	...	15	15	106.7	to 106.08	...	15	15
106.7	to 108.1**	...	35	35	106.08	to 102.5	...	45	45
108.1	to 113.0**	...	70	55	102.5	to 93.0	...	70	55
113.0	to 141.9**	...	50	50	93.0	to 91.6	...		
141.9	to 193.0**	...	30	30	(bridge and interlocking)	...	25	25	
193.0	to 208.0**	...	30	25	91.6	to 90.0	...	35	35
208.0	to 224.0**	...	40	40	90.0	to 89.15	...	25	25
224.0	to 242.2**	...	45	45	89.1	to 88.54	...	10	10
242.2	to 244.16**	...							
(Reno)	...		20	20					
244.16	to 246.20**	...	30	30					
*No. 1 Track					*No. 1 Track				
**No. 2 Track					**No. 2 Track				

Trains handling cars containing Hazardous Material—Refer to Miscellaneous Item 1, All Subdivisions, and must not exceed 30 MPH between the following mile post locations:

No. 2 Track:

Sacramento	MP 90.0 to MP 91.6
Elvas-Roseville	MP 92.5 to MP 106.8
Roseville-Penryn	MP 106.7 to MP 111.0
Newcastle	MP 119.8 to MP 120.5
Auburn	MP 123.5 to MP 125.3
Verdi	MP 231.5 to MP 232.0

No. 1 Track:

Verdi	MP 232.5 to MP 231.5
Penryn-Roseville	MP 115.1 to MP 106.7
Roseville-Elvas	MP 106.8 to MP 92.5
Sacramento	MP 91.6 to MP 90.0

Engines with flanger may operate at speeds shown in Column 1 not exceeding 40 MPH and between Colfax and Truckee may operate at 35 MPH.

Maximum authorized speed for freight trains is 55 MPH.

EXCEPTIONS:

- (a) Trains OAGF, RVNPP, RVOGP, OGOAT, RGMIA, RGOAT, UPMIA, UPSFF, UPSFT, and UPWSA are authorized to operate at Column 1 speeds not exceeding 60 MPH, provided train contains no restricted cars or empties except cabooses and does not exceed 80 tons per operative brake and/or 120 cars.
- (b) Eastward trains between Norden and Truckee and Westward trains between Norden and Loomis having between 120 and 145 cars are authorized to operate at Column 1 speeds provided train has no restricted cars and does not exceed 50 tons per operative brake.

SPECIAL INSTRUCTIONS—ROSEVILLE SUBDIVISION

- (c) Eastward trains between Norden and Truckee and westward trains between Norden and Loomis are authorized to operate at Column 1 speeds provided train has no restricted cars and does not exceed 80 tons per operative brake and/or 120 cars.
- (d) Other trains may be authorized by train order to operate at Column One speeds not exceeding 60 MPH provided they contain no restricted cars, or empties except cabooses, and do not exceed 80 tons per operative brake and/or 120 cars.

Speed on other than main track not to exceed . . . 10 MPH

Exceptions:

Truckee: Through power crossovers	25 MPH
Shed 47: Through crossover	25 MPH
Norden: Westward through crossover, from No. 2 to No. 1 Track	25 MPH
Norden: Through siding (and turnouts)	20 MPH

RULE P. LOCATION OF OVERHEAD AND SIDE STRUCTURES NOT STANDARD CLEARANCE ON MAIN TRACK AND SIDINGS

MP	Location	Description
POLK-ELVAS		
133.13	Brighton.....	Signal bridge.....Overhead
PLACERVILLE BRANCH		
122.3	East of White Rock.....	Rock cut.....Side
126.4	Latrobe.....	Rock cut.....Side
126.5	East of Latrobe.....	Rock cut.....Side
128.6	East of Latrobe.....	Rock cut.....Side

RULE 7-C. Fresno Yard: Trains entering or leaving yard tracks must receive proceed signal from switchman, green flag by day, green light by night, except within limits of diverging route signals, or engineer is orally authorized.

RULE 10-J. Speed may be increased as soon as lead engine has passed increase speed sign at following locations:

Westward MP	Eastward MP
102.8.....	Lodi..... 103.65

Speed signs located to left of track in direction of movement:

Westward	Reading	Eastward	Reading
MP 199.28	60-55	MP 72.25	40
		MP 110.6	60-55
		MP 147.7	45

Speed signs to right of track in current of traffic direction with one track intervening:

Westward	Reading	Eastward	Reading
		MP 132.1	40

RULE 26-B. Lathrop: MP 81.5. Libby Owens Ford Glass Co. Hinged platform has been placed on platform inside building near the end of Track No. 1. Protective signals have been placed on each side of door where track enters building. Trainmen and enginemen must not pass these signals if red indication or no indication is shown. Green indication must be shown before proceeding beyond signals.

Madera. (Winery Spur): MP 187.0. Access to United Vintners Winery is controlled by gates across track No. 5330 (old main track) and track No. 5360 in advance of tank car loading area, and another gate across track No. 5361 in advance of shipping area. A member of train crew must gain access by calling Security Guard on the intra-plant telephone.

At United Vintners MP 187.25, the 535 ft. end portion of each of two tracks is inside warehouse and entry is controlled by signals on each side of doorway. Enter only when green light visible. Red light or absence of light indicates "STOP."

Woodbridge: MP 104.8. General Mills Co. Signals have been placed over all tracks at doorways entering buildings. Trainmen and enginemen must not pass these signals if red indication or no indication is shown. Green indication must be shown before proceeding beyond signals.

Ione: MP 138.8. Interpace Corp. Track. Signal has been placed at retractable loading ramp with red aspect indicating ramp in position. Trainmen and enginemen must not pass signal displaying red indication. Green aspect must be showing before proceeding beyond retractable loading ramp.

RULE 80. Polk: Member of CCT crew must contact SP operator at Elvas for permission to enter SP tracks.

RULE 82-A. Train orders and clearances issued on the Roseville Subdivision will apply on the Stockton Subdivision and vice versa.

Elvas: Westward trains originating must be authorized by clearance issued at Roseville which must contain the OK, time and initials of the Chief Train Dispatcher.

RULE 83-A. At the following stations only trains indicated will register:

- Galt.....Trains required under the provisions of Rule S-240.
- Victor.....Trains required under the provisions of Rule S-240.
- Stockton.....Trains required under the provisions of Rule S-240.
- Ingle.....Trains required by train order.
- Biola Jct.....Trains required under the provisions of Rule S-240.

Stockton: Trainmen and enginemen should be on the lookout for messages to be picked up if light is showing in Train-Order stand.

RULE 93. Yard limits are established at the following locations:

West MP	East MP
80.7	Tracy (Martinez-West Side Line)..... 85.64
66.5	Tracy (Niles-Polk Line)..... 75.81
99.1	Westley..... 101.1
105.85	Patterson..... 108.62
112.0	Crows Landing..... 114.5
117.95	Newman..... 121.05
122.5	Gustine..... 124.6
132.9	Los Banos..... 142.01
152.2	Dos Palos..... 155.0
164.94	Firebaugh-Mendota..... 178.5
181.1	Ingle..... 182.5
	Ingle (Riverdale Branch)..... End of track
192.46	Kerman..... 194.53
202.0	Fresno (West Side Line).....
199.34	Fresno (East Side Line)..... 209.0
208.44	Fresno (Biola Branch).....
82.15	Stockton..... 92.17
	Stockton (Oakdale Branch)..... 94.4
103.53	Lodi (Kentucky House Branch)..... 107.5
103.51	Lodi (Woodbridge Branch)..... End of track
	Sacramento (Placerville Branch)..... 97.0
131.6	Sacramento (East Side Line)..... 136.33

RULE D-97. Applies on both main tracks between Lathrop and El Pinal.

RULE 98. Railroad crossings at grade not interlocked:

Trains and engines must approach with caution, and may move over the following crossings without stopping, if crossing clear and no movement approaching on intersecting line:

Stockton.....CCT Co., crossing of Oakdale Branch near MP 92.0.

Stop clear of the following crossings, then proceed if no movement approaching on intersecting line:

Brandywine...CCT Co., crossing of Kentucky House Branch.

Oakdale.....ATSF, crossing of Oakdale Branch.

MP 116.7 on Ione Branch...CCT Co., crossing of Ione Branch.

SPECIAL INSTRUCTIONS—STOCKTON SUBDIVISION

RULE 103. Automatic warning devices (controlled by single track circuit with "STOP" signs at control limits) exists at following crossings:

Location	Crossing No.	Track	Protection
Manteca	B-96.9	Yard	Gates
Calla	*B-98.52-C	Spreckels	Gates
Salida	B-106.4	Spur	Gates
Modesto	*B-112.3	Stor.; #2 Siding	Gates
Livingston	B-136.5	Drill track	Gates
Madera	#B-183.9-C	Spur	Fl. Lights
Firebaugh	BA-166.2	Siding	Gates
Firebaugh	BA-168.6-C	Britton	Fl. Lights
Cromir	BA-170.2	Drill	Gates
Kerman	BA-193.5	Siding	Gates
Tomsbur	#D-98.1	Spur	Gates
Oakdale	DC-122.3	House	Gates
Rancho Seco	DG-124.3-C	SMUD Spur	Gates
Stockton (Port)	DK-92.41-C	Spur	Gates

*Westward movements only.
#PUC Order.

Members of crew should assure themselves that crossing warning device is operating (and gates are down where they exist) before entering crossing or that warning is afforded by member of crew at crossing.

Los Banos: Crossing gates installed on crossings Mercy Springs Road, MP-141.2, and State Highway MP-141.3. Trains or engines switching in this area must not enter crossing until revolving yellow beacon, located on mast on north side of track between the two crossings, is actuated.

Turlock: City ordinance requires that in event of fire alarm being sounded, any train blocking Main St., MP-126.1, must clear crossing immediately. Switching must not be done over Main and Olive Street crossings between hours of 12 Noon and 1:00 PM.

No switching to be performed over Marshall Street except for spotting or removing of cars to or from industries served by these tracks.

Madera: Eastward through freight trains when stopping to set out, leave train clear of Central Avenue crossing, MP-183.3, and westward through freight trains clear of Olive Avenue crossing, MP-184.5.

Madera (Winery spur): Traffic signals at Howard Road (Crossing No. B-184.6-C) and adjacent Pine Street are preempted by train operation between stop signs installed each side of Howard Road crossing. On approach to crossing trains are to be brought to a stop. When traffic signals are in operation, trains are not to proceed until traffic signals show a flashing red aspect. When traffic signals are not in operation, trains are not to proceed until it is known crossing is clear or until warning is afforded to traffic by member of the crew.

Fresno: Eastward freight trains changing crews at Fresno, must stop to clear insulated joints located just west of Tulare Street unless otherwise instructed by yardmaster or his representative.

At the following locations, trains moving under the provisions of Rules 771 and 776 must not enter the crossing until warning for vehicular traffic has been afforded by a member of the crew, or it is known that automatic warning devices are operating:

Station	Location	MP
Lathrop	Lathrop Road	82.1
Modesto	Butchertown Spur	114.7
Turlock	Fulkerth Road	124.9
Arena	West Siding Switch (Arena Way)	139.0
Merced	"D" Street	151.3
Chowchilla	West Siding Switch (King St.)	168.0
Chowchilla	West Siding Switch (Robertson Blvd.)	168.1
Biola Jct.	Biola Branch (Old Highway 99)	208.5
Lodi	Woodbridge Rd.	105.1
Lodi	Lodi Ave.	102.1

Public Utilities Commission orders prohibit operation of train, engine, motor or car over the following crossings unless first brought to a stop and warning is afforded to traffic on the highway by a member of the crew:

Lodi	Crossing Oak St., D-103.25, and Pine St., D-103.3 on yard tracks,
Woodbridge	Crossing Turner Road on General Mills spur, DE-105.3-C,
Carbondale	Crossing County road when on industry track, DG-132.1,
Modesto	Tully Ave., on Grange Co. spur, B-112.25-C,
Vernalis	Crossing on Spur No. 6890, BA-93.0,
Los Banos	Crossing 2nd and 4th Sts., on drill crossovers and storage tracks, BA-140.1, BA-140.2,
Firebaugh	Crossing 12th St., on drill and spur tracks, BA-166.2.
Helm	County road crossing on Spreckels Sugar Co. track, BAO-199.1.

RULE 104. The normal position of rigid switches at the end of double track and at junctions, is as follows:

Ingle	Riverdale Branch, for Branch.
Fresno Yard	End double track, for westward track.
Fresno	{ West Side Line, for eastward main track. Stem of Wye for West Leg Wye.
Lodi	{ Woodbridge Branch, for Lathrop line. Yard track, for Kentucky House Branch.

Details on main track.

Location	MP
Kentucky House	142.2

RULE 104-A. Tracy: Westward freight trains approaching east end Tracy Yard must run expecting to find main track switch lined for movement into yard tracks.

Yellow switch targets and hooks have been installed on main track switches at the ends of the following branch lines:
Kentucky House Branch..MP-142.6, Kentucky House Biola Branch.....MP-200.5, Biola

RULE 104-D. Modesto: Under no circumstances are cars to be kicked or dropped into tracks serving Food Machinery Corporation Plant.

MOVEMENT OF TRAINS BY STAFF SYSTEM

RULE S-240. Applies at following location(s):

Territory	Register Location
Placerville Branch:	
MP 97.0 to Placerville	Sacramento
Oakdale Branch:	
MP 94.4 to Claribel	Stockton
Kentucky House Branch:	
MP 107.5 to Kentucky House	Victor
Ione Branch:	
MP 112.1 to Ione	Galt
Biola Branch:	
MP 208.44 to Biola	Biola Jct.
Stockton: Eastward trains via Oakdale Branch must not leave yard until authorized by yardmaster or his representative.	
Oakdale: Trains and engines must move with caution between F and G Streets expecting to find main track occupied by Sierra Ry. trains or engines.	

RULE D-251: Will apply:

- On eastward track: Lathrop to MP 92.2.
- On westward track: MP 92.2 to MP 81.24.
- On both tracks between Fresno Yard and Calwa Tower.

RULE 291. Lathrop: Flashing yellow aspect governs movements to east or west leg of wye at Fresno end of wye.

RULE 306. The following home signals equipped with triangular plate bearing the letter "P" have included in their control limits some special protective device. Absolute and interlocking signals are listed as "P-A," "P-SA" or "P-I."

Eastward Signal	Protection	Westward Signal
TRACY-FRESNO (WEST SIDE LINE)		
P-710	Spring switch, junction to West side Line, Tracy	
	Spring switch to yard, Tracy	P-829
P-2046	Barricade detector, MP-204.6, Fresno	P-2051
TRACY-POLK LINE		
	Spring switch to Freight Lead, MP-75.9 (Polk Line)	P-SA
	Spring switch, Stockton wye	P-I
LATHROP-FRESNO (EAST SIDE LINE)		
P-1972	Spring switch, Crossover Biola Jct.	P-A
P-2042	Barricade detector, MP 204.6	
P-A	Barricade detector, MP 109.5	P-A

AUTOMATIC BLOCK SIGNAL SYSTEM

RULE 505. Tracy: Trains moving on main track in either direction will move between junction switch MP 70.62 and P-SA Signal MP 75.9, beginning CTC, by block signals whose indications will supersede the superiority of trains.

Signal P-710 is a two unit signal and governs movement as follows:

Top Unit To Lathrop
Bottom Unit To Los Banos

Signals 713, 825 and 827 are approach clearing. Signal 713 will revert to stop position when 600-ft. track circuit in front of station building is occupied for approximately four minutes. A second approach circuit is located at MP 71.39, 185 feet east of MacArthur Blvd., to clear Signal 713 for movements to be continued.

Approach circuit to Signal 825 on Track No. 1 begins 185 feet east of MacArthur Blvd.

Approach circuit sign is north of main track 185 feet east of MacArthur Blvd.

Signal P-829 is a two unit signal and governs movement as follows:

Top Unit To Main Track
Bottom Unit To Yard

Signals 716 and 723 on Track No. 1 at crossover near MP 72 govern movements over crossovers to enter main track only. These signals will not be lighted when crossovers are lined normal. Time circuits are provided to cut out west control of Signal 716, 2 minutes and 40 seconds after crossover is lined; east control of Signal 723, 6 minutes and 10 seconds after crossover is lined; and west control of Signal 736, 5 minutes and 20 seconds after crossover is lined. If signals fail to clear at expiration of time interval, Rule 507 will govern.

Signal 735 is a two unit signal and governs movement as follows:

Top Unit On Main Track
Bottom Unit To Yard Thru Cross Over

Signal 736 on Track No. 1 is a three unit signal and governs movement as follows:

Top Unit To Freight Lead
Center Unit To Main Track
Bottom Unit To Freight Lead

Eastward trains moving on main track must not pass Signal 734 and eastward trains entering main track through crossover MP 73.5 must not pass Signal 736 until signal governing movement displays proceed indication or permission obtained from train dispatcher. When Signal 734 displays proceed indications, eastward trains on main track may proceed to Centralized Traffic Control limits MP 75.81, and when Signal 736 displays proceed indication, eastward trains entering

main track through crossover are authorized to enter main track and proceed to Centralized Traffic Control limits MP 75.81.

When westward P-SA Signal at MP 75.9 displays proceed indication, westward trains are authorized to proceed on main track to Signal 735, Tracy Yard.

When Signal 816, approach signal to West End Tracy displays stop indication, eastward trains may proceed after receiving oral authority from operator at Tracy but must comply with Rule 507.

Push buttons are located on Signal 827 on West Side Line, and instrument case east of MacArthur Blvd. on East Side line to clear signals over junction switch.

Push buttons are located on instrument case opposite Signals 828 and 826, West Side line, west of spring switch to yard.

RULE 509. Fresno: Trains from Fresno Yard to operate via West Side Line may pass Signal 2036 displaying stop indication without stopping at restricted speed to enter west leg of wye if wye switch is properly lined and proceed signal received from switchman or oral authorization is given.

SPRING SWITCHES

RULE 538. Spring switches equipped with facing point locks are located as follows:

Station	Location	Normal Position
Tracy	Junction switch MP-71.16 to West Side Line	East Side Line
Tracy	MP-75.9 Freight Lead to Main Track	Main Track

Spring switches not equipped with facing point locks are located as follows:

Station	Location	Normal Position
Biola Jct.	East Switch of Crossover	Freight Lead
Tracy	MP 82.98 West Side Line to yard	Yard Track
*Stockton	West Leg of Wye	West Leg of Wye

*Has ground throw switch stand below plate at switch. Not equipped with target bearing letters "SS."

Switch point indicator located at:

Fresno Yard . . . Spring switch leading from Freight Lead to Track No. 31 west of Ashlan Avenue.

INTERLOCKING

RULE 606. Tracy: Limits extend from westward SA Signal at MP 70.68 to eastward SA Signal at MP 70.64 on the Niles Line and from MP 70.68 to eastward SA Signal at MP 82.18 on the Martinez Line.

Position of the junction switch between Niles Subdivision MP 70.66 and Martinez Subdivision MP 82.16 controlled by switchman from control panel located at the base of the yardmaster's tower.

The junction switch between Niles Line MP 70.66 and Martinez Line MP 82.16 is a dual control switch. When necessary to hand throw this switch, permission must be obtained from the yardmaster and be governed by Rules 771 and 772.

Interlocking portion of the SA signal is controlled by Tracy operator who shall determine that switch has been lined for proper route before clearing a signal.

Stockton: WP crossing Weber Avenue and Union St.: Signals governing movements over WP track at MP 91.0 are under control of WP train dispatcher. When signals governing movement over crossing display stop indication after approach circuit is occupied, a member of crew must contact WP train dispatcher for permission and instructions to operate push button time release.

Elvas: Limits extend on East Side Line to interlocking signal at west switch Polk; and on Placerville Branch to interlocking signal 600 feet east of junction switch at Brighton.

Interlocking signals governing movements against the current of traffic on the eastward and westward main tracks are equipped with switch key actuator start boxes. Permission must be obtained from operator Elvas before switch key is inserted in start box. Signal will not clear until switch key actuator is operated. **IN ADDITION, BEFORE MOVEMENT AGAINST CURRENT OF TRAFFIC IS MADE, PROTECTION MUST BE PROVIDED IN ACCORDANCE WITH PROVISIONS OF EITHER RULE D-160 OR RULE D-162.**

AUTOMATIC INTERLOCKING

RULE 680. French Camp, WP Crossing MP 87.74. Interlocking limits: Interlocking signals 500 feet west of and 430 feet east of WP crossing on eastward main track. Interlocking signals 430 feet east of and 380 feet west of WP crossing on westward main track. Interlocking signals 240 feet west of and 210 feet east of WP crossing on the drill track.

Lyoth: WP crossing, MP 85.16. Limits extend from eastward SA Signal 825 feet west of crossing to westward SA Signal 590 feet east of crossing.

Signals are approach clearing, if movement over crossing is not completed within 8 minutes after train enters approach circuit, signals will revert to STOP position. Approach circuits to re-clear SA signals are located 800 feet in advance of eastward signal and 500 feet in advance of westward signal.

Cars or engines are not to be left standing on these circuits. Push button time release in box marked "SP" and block indicator marked "WP" are installed near crossing.

Instructions for operating time release are posted in box. If signal indicates STOP for train desiring to make movement over crossing, a member of crew will proceed to crossing to operate time release. If block indicator marked "WP" indicates block clear, press push button until yellow light appears, then release. Approximately 8 minutes later a red light should appear under the button and signal indicate proceed.

If signal displays flashing red indication train may proceed through interlocking limits.

If home signal indicates STOP and red indicator light cannot be actuated, train may proceed over crossing as provided for in Rule 663(c).

LETTER-TYPE INDICATORS

RULE 705. Indicators located as follows:

Illum. Letter	On Signal Approaching	Authorizes and Requires Movement as Follows:
S	Post at east switch Covell	West Modesto Take siding at West Modesto
S	Absolute Signal MP 114.9	Modesto Take siding at West Modesto

CENTRALIZED TRAFFIC CONTROL

RULE 760. Limits extend from eastward absolute signals at MP 75.81 on Tracy Line and westward absolute signal at MP 82.15 on Polk Line at Lathrop, to westward absolute signal at MP 199.32 at Biola Junction on East Side Line.

Lathrop: Eastward 3 unit signal MP 81.3 (west junction switch) governs movements as follows:

- Top unit eastward main track
- Center unit East Side Line
- Bottom unit westward main track
- Flashing yellow,
Rule 291 westward main track or East Side Line.

Westward 3 unit signal MP 82.15 governs movements as follows:

- Top unit westward main track
- Center unit East Side Line
- Bottom unit eastward main track

Movements across WP MP 93.72 under control of SP train dispatcher.

When absolute signals governing movements over crossing display "STOP" indication, member of the train crew must contact train dispatcher by telephone for instructions.

If signal cannot be cleared and there is no train approaching from either direction on WP, train dispatcher may authorize member of crew to operate push-button time release in accordance with instructions in box marked "SP" located near the crossing.

Movements in an eastward direction to westward main track east of crossover at MP 82.15 will be governed by the following:

Moves will be controlled by dispatcher after member of crew contacts and receives permission to make move. Dispatcher will line switches and initiate signal. To clear signal member of crew will activate push-button located in control box mounted on pole adjacent to signal in vicinity of MP 82.15. Controlled moves are as follows:

1. To make move from East Side Line through cross-over to westward main track activate right hand push-button labeled 28RDPB and signal should clear.
2. To make move from eastward main track through crossover to westward main track, activate center push-button labeled 28RBPB and signal should clear.
3. To make eastward move on westward main track, activate left hand push-button labeled 30RPB and signal should clear.

Manteca: Track No. 1 extends from MP 96.73 to MP 97.72.

Calla siding extends from MP 97.74 to MP 99.44, is CTC controlled siding, capacity 8350 ft. Crossover at west end Calla siding is equipped with dual control switch machines.

Calla: Westward absolute siding signal at west end siding is three-unit signal and governs movement as follows:

- Top unit To Manteca Track No. 1.
- Center unit To main track.
- Lower unit To Manteca Track No. 1.

Modesto: Movements across TS Ry., MP 114.7, on main track and MP 114.92 on Butchertown Spur under control of SP train dispatcher.

When absolute signals governing movements over crossing display stop indication, member of train crew must contact train dispatcher by telephone for instructions.

If signal cannot be cleared for main track movement and there is no train approaching from either direction on TS Ry., train dispatcher may authorize member of crew to operate push-button time release in accordance with instructions in box marked "SP" located near the crossing.

Butchertown Spur Movements:

Absolute signals on Butchertown spur will not display preceed indication unless main track switch is lined for movement to Butchertown spur.

If signal cannot be cleared for Butchertown movements and there is no train approaching from either direction on TS Ry., train dispatcher may authorize member of crew to operate push-button time-release in accordance with instructions in box located near the main track switch.

El Pinal-Polk: Limits extend from signal at MP 92.30, 650 feet west of WP crossing at El Pinal, to westward signals at MP 131.81 at west end of Polk.

El Pinal: CTC signals governing movements against the current of traffic on the eastward or westward main track are equipped with switch key actuator start boxes. Permission must be obtained from Train Dispatcher before switch key is inserted in start box. Signals will not clear until switch key actuator is operated. **IN ADDITION, BEFORE MOVEMENT AGAINST CURRENT OF TRAFFIC IS MADE, PROTECTION MUST BE PROVIDED IN ACCORDANCE WITH EITHER RULE D-160 OR RULE D-162.**

Movements across WP MP 92.3 under control of SP train dispatcher.

When absolute signals governing movements over crossing display "STOP" indication, member of the train crew must contact train dispatcher by telephone for instructions.

If signal cannot be cleared and there is no train approaching from either direction on WP, train dispatcher may authorize member of crew to operate push-button time-release in accordance with instructions in box marked "SP" located near the crossing.

GENERAL REGULATIONS

RULE 812. Main track between Fresno Yard and Chowchilla MP 167.0, including Biola Branch; Fresno Yard and Ingle MP 181.1, including the Riverdale Branch is under the supervision of the Los Angeles Division.

RULE 825. Tracy: All freight trains entering Tracy Yard will apply not less than three hand brakes on the east end unless instructed otherwise by yardmaster.

Portable rail sids are hung on posts at the following locations:

Placerville { East end team track.
West end interchange tracks.

RULE 827. DRAGGING AND / OR DERAILED EQUIPMENT DETECTOR AND INDICATOR INSTALLED AT THE FOLLOWING LOCATIONS:

MP	Location
78.1	Lathrop-Tracy
*84.0	Lathrop-French Camp
95.5	Lathrop-Manteca
100.0	Tomspur-Lodi
102.3	Calla-Covell
103.6	Westley-Patterson
109.1	Acampo-Galt
109.3	Covell-Modesto
116.0	Modesto-Ceres
119.5	Elk Grove-Need
121.1	Ceres-Turlock
124.5	Ceres-Turlock
125.6	Elk Grove-Florin
132.5	Delhi-Livingston
142.5	Arena-Atwater
144.7	Arena-Fergus
152.5	Merced-Lingard
161.2	Lingard-Chowchilla
165.9	Lingard-Chowchilla
173.1	Chowchilla-Notarb
181.8	Notarb-Irrigosa
187.0	Borden-Irrigosa
193.6	Irrigosa-Biola Jct.
203.8	Kerman-Fresno

*On both main tracks.

HOT BOX DETECTORS

MP	Type	Directions(s)	Location
97.6	C	Both	Akers-Lodi
119.5	C	Both	Elk Grove-Need
102.3	C	Both	Calla-Covell
121.1	C	Both	Ceres-Turlock
144.7	C	Both	Arena-Fergus
161.2	C	Both	Lingard-Chowchilla
193.6	D	East	*Irrigosa-Biola Jct.
103.6	A	Both	Westley-Patterson

*Recorder at Fresno Yard, Car Foreman's office.

TYPE "A" HOT BOX DETECTOR LETTER TYPE INDICATOR AND READOUT LOCATIONS

Illum. Letter	Signal	Approaching	Location of Readout
H	1019	Westley	MP 99.5 Westley
W	1020	Patterson	
W	1041	Westley	
H	1056	Patterson	MP 106.8 Patterson

Refer to Rule 827, All Subdivisions.

RULE 827-A. Trains handling cars containing Class A Explosives, Radioactive material, or tank cars containing Acrylonitrile, Anhydrous Ammonia, Chlorine, Hydrofluoric Acid, Poison Gas, or Flammable Gas (FG) must stop and inspect train at the following locations:

Eastward Trains	Westward Trains
Irrigosa Crayold	Lyoth

Elvas & Tracy: Trains handling cars containing Class A Explosives, Radioactive material, or tank cars containing Acrylonitrile, Anhydrous Ammonia, Chlorine, Hydrofluoric Acid, Poison Gas, or Flammable Gas (FG) must be given a rolling inspection by outbound train crew unless otherwise instructed.

Refer to Rule 827-A, All Subdivisions.

RULE 872. Tracy, Stockton and Fresno: Engine-men taking charge of road engines will consider engines as having been amply supplied with water, fuel, sand and other supplies.

AIR BRAKE RULES

RULE 2, A. Taking Charge of Engines.

Will apply at:
Tracy, Stockton and Fresno Yard.

FREIGHT TRAINS

RULE 17. Retaining valves must be used on freight trains on descending grades:

Toyon to MP-125.5 (Kentucky House Br.)
MP 131.7 to MP 123.0 (Placerville Br.)

WITHOUT DYNAMIC BRAKE IN OPERATION:

One retaining valve for each 80 tons in train. If gross tonnage exceeds 80 tons per operative brake, retaining valves must be used on all cars, and speed must not exceed 15 MPH.

WITH DYNAMIC BRAKE IN OPERATION:

Permissible Tons Per Unit Without Retaining Valves

Basic Dynamic Brake		Extended Range Dynamic Brake	
4-Axle	6-Axle	4-Axle	6-Axle

With dynamic brake in operation **without** pressure maintaining system of braking
Toyon to MP-125.5 (Kentucky House Br.)

MP 131.7 to MP 123.0 (Placerville Br.)	525	625	550	950
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MP 123.0 (Placerville Br.)	600	900	725	1075
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With dynamic brake in operation **with** pressure maintaining system of braking
Toyon to MP 125.5 (Kentucky House Br.)

MP 131.7 to MP 123.0 (Placerville Br.)	1500	1800	1600	2700
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MP 123.0 (Placerville Br.)	1500	2250	1800	2700
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If permissible tonnage is exceeded, one retaining valve must be used for each 150 tons of excess tonnage.

Refer to Air Brake Rule 17, All Subdivisions.

RULE 21. Tracy: Trainmen must not couple air hoses on outgoing trains until train is made up and the caboose and road engine is on train.

SPECIAL INSTRUCTIONS—STOCKTON SUBDIVISION

RULE 24. Fresno Yard: Will apply only when advised by yardmaster.

RULE 24-C. Tracy: When cars are added to or removed from through trains, with consist otherwise remaining intact, outgoing crew will make air brake test in accordance with this rule.

Ione: Before making any switch movement at Owens-Illinois or Interpace on the Owens-Illinois Lead, it must be known that air brake system on each car being handled is fully charged, air hoses coupled between engine and cars and angle cocks properly positioned.

RULE 24-G. Will apply at Tracy and Fresno Yard.

RULE 25. Will apply at Toyon.

RULE 33. Toyon to MP 125.5 (Kentucky House Br.) MP 131.7 to MP 123.0 (Placerville Br.)

MAXIMUM TONS PER OPERATIVE BRAKE. .80 TONS

Restrictive Grades are as follows:

Westward	MP to	MP	MPH
Kentucky House Branch	142.9	142.5	20
	129.1	124.7	20
Placerville Branch	150.0	122.0	20
	117.5	111.7	20

Exceptions:

Trains with not more than 425 tons per axle of dynamic brake, pressure maintaining system of braking in operation and speed not exceeding 20 miles per hour:

Insufficient dynamic brake capacity or failure of dynamic brake which results in exceeding these tonnages per axle, is to be considered as operating without dynamic brake.

Should dynamic brake failure occur or partial failure of dynamic braking occur resulting in insufficient dynamic brake capacity, train is to be considered as operating without any dynamic brake. Trains must stop and all retaining valves turned up. Train may then proceed not exceeding 15 MPH if, in the judgment of the conductor and engineer, it is safe to do so.

MISCELLANEOUS

1. LOAD LIMIT (car and contents):

*Tracy-Polk	263,000 pounds
#Tracy-Polk	315,000 pounds
Stockton-Claribell	240,000 pounds
Woodbridge-Kentucky House	240,000 pounds
Galt-Rancho Seco	315,000 pounds
Rancho Seco-Ione	240,000 pounds
*Brighton-Elvas	315,000 pounds
Brighton-Placerville	263,000 pounds
*Lathrop-Fresno	263,000 pounds
#Lathrop-Fresno	315,000 pounds
*Tracy-Fresno via Westside	263,000 pounds
#Tracy-Fresno via Westside	315,000 pounds
*Ingle-Riverdale	263,000 pounds
#Ingle-Riverdale	315,000 pounds
#Biola Jct.-Biola	315,000 pounds

Applies to uniformly loaded four-axle cars having trucks spaced 23 ft. 0 in. or more center to center and minimum axle spacing of 5 ft. 6 in.

#Applies to uniformly loaded four-axle cars with minimum axle spacing of 6 ft. 0 in. and minimum distance 37 ft. 0 in. center to center of trucks; also, wheels 38 in. or more in diameter.

*Refer to All Subdivisions, Page 18, Miscellaneous item 14.

Unless authorized by Superintendent, heavier loads must not be handled.

2. Stockton: Following will govern movement over ATSF and Stockton Public Belt Railroad:

Limits of Stockton Tower include that portion of main track, siding and crossovers on the ATSF to Stockton Public Belt Railroad, at ATSF MP 1122.97. Signal indications supersede the superiority of trains in both directions on both tracks. At Lincoln Street, MP 1121.75 signals and power switch to Port Lead are controlled from Stockton Tower. Tower telephone located near Lincoln Street signal. West end of Fiberboard support tracks diverge from Port Lead at MP 1121.9 and converge with Port Lead at MP 1122.14. Fiberboard spur track diverges from Port Lead at MP 1122.17. The Washington Street Yard Lead diverges from the Port Lead at MP 1122.2. Crossover also exists between ATSF main track and Port Lead at MP 1122.28. Signals and power switches at crossover are controlled from Stockton Tower. Tower telephone located near east switch of crossover. West end of setout track diverges from Washington Street Yard Lead at MP 1122.21, east end of set-out track converges with Port Lead track at MP 1122.54.

The movement of trains and engines in this territory is under the control of Stockton Tower, who may issue instructions as required and must be advised in advance of any movement of trains and engines to the ATSF main track and also advised of any known condition that will delay the train or engine or prevent it from making usual speed.

Crews will not leave the Port of Stockton yard (in area of yard office) without securing authority of Stockton Tower interlocking operator. This authority may be obtained orally, or through yardmaster at Port of Stockton.

Speed limit between Stockton Tower and Stockton Public Belt Railroad is 20 MPH; through turnouts and crossovers—12 MPH.

Following fixed signals and indications are effective in above specified territory, and between Stockton Tower and ATSF Mormon Yard:

RED.....Stop and communicate with Stockton Tower for instructions.

FLASHING RED.....Proceed prepared to stop short of train, obstruction or switch not properly lined, but not exceeding 20 MPH.

RED OVER YELLOW..Same as flashing red.

S.P. movements entering ATSF interlocking limits at Commerce Street may disregard the letter A on signal governing entrance thereto as it applies to WP movements only.

Following whistle signals will be observed at Stockton Tower:

To and from SP and ATSF yards.....	0 0 0 -.
From SP to ATSF enroute Commerce Street....	0 - 0.
For Middle Track.....	0 - -.
For Old Siding.....	- - 0 0.
For Westward Main Track.....	0 0 - -.
For Eastward Main Track.....	- 0 - -.
From SP to ATSF enroute Lincoln Street.....	0 - 0 - -.

3. Only engines listed may operate on branches shown below:

Class of Engine	Branch
ES412	} Oakdale Branch Kentucky House Branch Woodbridge Branch Ione Branch
ES415	
ES418	
EF420	
EF423	
EF425	
GF425	
GF428	} Placerville Branch
EF430	
ES412	
ES415	
EF418	
EF618	

SPECIAL INSTRUCTIONS—STOCKTON SUBDIVISION

SPEED RESTRICTIONS FOR TRAINS

Refer to Miscellaneous Item 1, All Subdivisions. Speed must be further reduced as prescribed by speed signs, except as specifically authorized by Special Instructions herein, or by Timetable Bulletin.

EASTWARD			PSGR TRAINS	FRT	WESTWARD			PSGR TRAINS	FRT
MP	MP	Column:	1	2	MP	MP	Column:	1	2
TRACY to ELVAS:									
71.16 to 72.25			35	35	ELVAS to TRACY:				
72.25 to 81.3			40	40	136.38 to 135.99				
81.3 to 81.5					(wye from			25	25
(switches)			20	20	Roseville)				
81.5 to 87.4			60	40	136.36 to 135.99				
87.4 to 89.7			40	40	(wye to			20	20
89.7 to 91.4			20	20	Sacramento)			40	40
91.4 to 92.32			50	50	134.1 to 103.65			60	55
92.32 to 95.02					103.65 to 102.8			30	30
(via No. 2					102.8 to 95.02			60	55
Track)			50	50	95.02 to 92.39				
92.32 to 92.36					(via No. 1			50	50
(via No. 1					Track)				
Track, cross-			15	15	95.02 to 92.43			50	50
over)					(via No. 2				
92.36 to 95.02					Track)			50	50
(via No. 1					92.43 to 92.39				
Track)			50	50	(via No. 2				
95.02 to 102.8			60	55	Track, cross-			15	15
102.8 to 103.65			30	30	over)			40	40
103.65 to 133.17			60	55	92.39 to 91.4			40	40
133.17 to 134.1			45	45	91.4 to 89.7			20	20
134.1 to 136.0			40	40	89.7 to 87.4			40	40
136.0 to 136.38					87.4 to 81.37			60	40
(wye to					Thru diverging				
Roseville)			25	25	route crossover				
136.0 to 136.36					and switches,			25	25
(wye to					Lathrop)			40	40
Sacramento)			20	20	81.37 to 72.25			40	40
					72.25 to 71.16			35	35

OAKDALE BRANCH			ALL TRAINS	OAKDALE BRANCH			ALL TRAINS
MP	MP	Column:	1	2	MP	MP	Column:
STOCKTON to CLARIBEL:							
90.95 to 93.1			10		CLARIBEL to STOCKTON:		
93.1 to 124.4			25		124.4 to 122.3		25
					122.3 to 122.2		10
					122.2 to 93.1		25
					93.1 to 90.95		10

SPEED RESTRICTIONS FOR TRAINS—Continued

EASTWARD			PSGR TRAINS	FRT	WESTWARD			PSGR TRAINS	FRT
MP	MP	Column:	1	2	MP	MP	Column:	1	2
LATHROP to FRESNO:					FRESNO to LATHROP:				
On East leg of					205.5 to 199.28				
wye, Lathrop					199.28 to 195.0				
92.8 to 93.07					195.0 to 177.3				
(switches)					177.3 to 151.6				
93.07 to 94.0					151.6 to 149.7				
94.0 to 107.5					149.7 to 134.8				
107.5 to 114.9					134.8 to 114.9				
114.9 to 134.8					114.9 to 107.5				
134.8 to 149.7					107.5 to 94.0				
149.7 to 151.6					94.0 to 93.07				
151.6 to 177.3					93.07 to 92.8				
177.3 to 195.0					(switches)				
195.0 to 199.28					East leg of wye,				
199.28 to 201.89					Lathrop				
201.89 to 201.93									
(thru turnout)									
201.93 to 205.5									
BIOLA JCT. and BIOLA:									
208.62 and 199.93									

BETWEEN		ALL TRAINS	BETWEEN		ALL TRAINS
MP	MP		MP	MP	
TRACY to FRESNO:					
82.58 to 83.0					
(Jct. Switch)					
83.0 to 108.4					
108.4 to 131.3					
131.3 to 182.0					
182.0 to 206.87					
206.87 to 207.36					
(Jct. Switch)					
RIVERDALE BRANCH INGLE and BURRELL					
181.97 to 186.0					
186.0 to 190.4					
190.4 to 208.73					

Trains handling empty tank cars in series GLNX 34000-34024, do not exceed 5 MPH between MP 186.0 and MP 190.4, Riverdale Branch.

Trains handling cars containing Hazardous Material—Refer to Miscellaneous Item 1, All Subdivisions, and must not exceed 30 MPH between the following mile post locations:

BETWEEN		ALL TRAINS	BETWEEN		ALL TRAINS
MP	MP		MP	MP	
KENTUCKY HOUSE BRANCH Lodi and KENTUCKY HOUSE:					
103.51 and 121.4					
121.4 and 127.92					
127.92 and 127.95					
127.95 and 132.2					
132.2 and 139.7					
139.7 and 142.84					
WOODBRIDGE BRANCH Lodi and WOODBRIDGE:					
IONE BRANCH GALT and IONE:					
112.12 and 112.5					
112.5 and 138.99					
PLACERVILLE BRANCH BRIGHTON and PLACERVILLE:					
94.67 and 94.74					
94.74 and 111.05					
111.05 and 111.34					
111.34 and 139.0					
139.0 and 139.3					
139.3 and 149.07					
149.07 and 150.01					

Polk-Elvas	MP 132.0 to MP 136.0
Stockton	MP 87.5 to MP 90.4
Modesto	MP 110.0 to MP 114.0
Turlock	MP 125.0 to MP 127.0
Merced	MP 149.0 to MP 151.0
Madera	MP 183.0 to MP 185.0
Fresno	MP 199.0 to MP 209.0
Patterson	MP 106.5 to MP 108.0
Newman	MP 119.0 to MP 120.0
Gustine	MP 123.0 to MP 124.0
Los Banos	MP 140.1 to MP 141.3
Firebaugh	MP 165.5 to MP 167.0
Mendota	MP 174.0 to MP 175.5

SPECIAL INSTRUCTIONS—STOCKTON SUBDIVISION

Maximum authorized speed for freight trains is 55 MPH.

EXCEPT:

Trains LABRF, LABRT, and BRLAT are authorized to operate at Column 1 speeds not exceeding 60 MPH between Tracy and Polk; and between Lathrop and Fresno, provided train contains no restricted cars or empties except cabooses and does not exceed 80 tons per operative brake and/or 120 cars.

Other trains may be authorized by train order to operate at Column One speeds not exceeding 60 MPH provided they contain no restricted cars, or empties except cabooses, and do not exceed 80 tons per operative brake and/or 120 cars.

Stockton: Coupled-in-motion track scale located on lead track, Stockton Yard, MP 89.2. Speed of train when weighing must not exceed 4 MPH. Bi-directional indicator lights located at scale, MP 88.5 and MP 89.8. Continuous white aspect indicates speed is under 4 MPH, flashing white aspect, speed is in excess of 4 MPH. Speed of train when weighing should be at continuous speed without slack action or stopping.

Tracy: Westward freight trains passing signal 735, eastward trains passing yard office, and trains to or from the West Side Line operating on either leg of wye, must not exceed 10 MPH to allow visual verification of consist.

Speed on other than main track not to exceed . . . 10 MPH

Exceptions:

Through controlled sidings and turnouts in CTC . 25 MPH

Tracy Freight Lead, from Banta Rd., MP 73.6,
to MP 75.9 30 MPH

Except:

Through spring switch at east end 25 MPH

Biola Jct.: Freight Lead 30 MPH

RULE P. LOCATION OF OVERHEAD AND SIDE STRUCTURES NOT STANDARD CLEARANCE ON MAIN TRACK AND SIDINGS

MP	Location	Description
89.26	Yolo	Cache Creek bridge.....Overhead
167.72	West of Hamilton	Stony Creek bridge.....Side
300.00	Lamoine	Bridge on siding.....Side
301.80	Lamoine	Bridge No. 6.....Overhead and side
302.20	Lamoine	Bridge No. 7.....Overhead and side
305.40	Gibson	Tunnel No. 13.....Overhead and side
306.70	Fisher	Bridge No. 9.....Overhead and side
310.60	Sims	Bridge No. 13.....Overhead and side
210.82	Tehama	Sacramento River Bridge.....Overhead

RULE 6-A. Davis: North siding is first track west of main track on Gerber line extending from MP 76.03 to MP 76.75.

Wyo: Siding is second track of the two tracks paralleling main track.

Redding: Siding is first track on south side of main track extending from MP 258.68 to MP 256.58. This is not a controlled siding and all movements must be made with caution.

RULE 7-C. Roseville: Switchmen must use yellow flag by day and yellow light by night or oral authorization in giving proceed signals for movement of trains.

RULE 10-J. Speed may be increased as soon as lead engine has passed increase speed sign at following locations:

Westward MP	Eastward MP
84.4	Woodland..... 85.5
149.5	Willows.....150.0
178.0	Corning.....178.9
247.0	Anderson.....247.3

Speed signs to left of track in direction of movement:

Westward	Reading	Eastward	Reading
MP 145.88	45		

RULE 21. Identification of superior trains via Corning may be made at Redding or between Redding and Tehama and such identification will apply at Tehama.

RULE 82-A. Westward regular trains via Corning must be authorized at Redding by clearance bearing the OK, time and initials of the Chief Train Dispatcher and specifying green or no signals as required.

RULE 83-A. At the following stations, only the trains indicated will register:

- Woodland—Trains originating or terminating.
- Harrington—Trains specified by train order and trains to and from Colusa Br.
- Wyo—Trains specified by train order and trains to and from Hamilton Br.
- Red Bluff—Trains originating or terminating.
- Redding—Regular trains via Corning and trains to and from the Matheson Branch.
- Roseville—All trains except extra trains consisting entirely of passenger equipment and not terminating at Roseville.

RULE 83-B. At open train-order offices, trains may register by ticket as follows:

- Davis—All trains.
- Redding—Regular trains via Corning.

RULE 86. Davis: Eastward trains originating at Davis via Tehama, are authorized to operate ahead of No. 14, from eastward "SA" signal at MP 75.7 which governs movement on Tehama Line to east switch of north siding, being governed by signal indication or Rule 663.

RULE 93. Yard limits are established at the following locations:

West MP	East MP
	Davis..... 78.0
83.66	Woodland..... 90.5
	Woodland (Knights Landing Branch, End of Branch)..... 88.24
147.96	Willows.....150.84
164.48	Orland.....167.72
177.62	Wyo (Hamilton Branch).....
	Redding (Matheson Branch).....259.23
	Roseville.....106.65
143.78	Berg (Yuba City Branch).....End of Branch
183.48	Chico (Stirling City Branch).....End of Branch

Roseville: Westward trains and engines from East Valley Subdivision must not pass Signal 1063 unless proceed signal, yellow flag by day, yellow light by night, or oral authorization received from switchman. When Signal 1063 displays proceed indication, switch point indicator located adjacent to Signal 1063 will be dark. Westward trains and engines entering the yard must not pass red aspect of switch point indicator adjacent to Signal 1063 until switchman or yardmaster notified and position of switches are rechecked for proper position and authority received from switchman to proceed.

RULE D-97. Applies on both main tracks between Gerber and Tehama.

RULE 98. Railroad crossings at grade not interlocked:

Roseville: Lead from yard to Valley Subdivision main track crosses No. 2 Track and No. 1 Track of Roseville Subdivision near station sign. Eastward freight trains from yard to Valley Subdivision will be governed by Signal 1062 and westward freight trains from Valley Subdivision to enter yard will be governed by bottom unit of Signal 1063 before fouling or moving over No. 2 Track and No. 1 Track.

Yuba City: SNRy at Bridge St., and at B St.—Stop within 200 feet of crossings.

MP 186.60 on Stirling City Branch: SNRy crossing—Stop within 200 feet of crossing.

Stop signs with red reflective background have been placed at the following railroad grade crossings:

- Yuba City.....(Bridge Street.
B Street.
- Stirling City Br.....MP 186.6

RULE 103. Trains and engines must stop and be preceded by flagman before crossing highway at:

- Woodland.....Main St. crossing on house Track No. 3628.
- Orland.....Spur Track No. 3339, serving Murco Produce crossing Tehama Street.
- Clayton.....Spur.

Woodland: STOP signs installed on Ogden Lead Track No. 3638 at Cross Street and on Ogden Lead Track No. 3636 and House Track No. 3628 at Oak Street. Warning by crew member to traffic must be afforded before moving over these crossings.

Zamora: Stop signs installed governing movements on siding at County Road Crossing 93-B, MP 95.7. Trains and engines must stop at stop sign and allow gates to lower fully and operate twenty seconds before entering crossing.

Redding: Passenger trains stopping at station will stop clear of impulse circuit indicated by white marker on platform, to permit crossing gates to raise. When train starts, proceed slowly to permit gates to lower after passing impulse circuits. Sound detector microphones adjacent to track just east of Yuba St. for westward movement and just west of Tehama St. for eastward movement. Trains stopped to receive or discharge traffic must sound whistle to activate gates and crossing must not be entered until gates are down.

SPECIAL INSTRUCTIONS—VALLEY SUBDIVISION

Colusa: Stop signs installed on crossing MP 132 State Highway 20.

Trains must stop at stop sign and allow gates to lower fully and operate twenty seconds before entering crossing.

Girvan: Whistle mikes installed on main track and siding east of road crossing at MP 253.3 at west end.

Westward trains stopped east of the crossing, MP 253.3, on main track or siding will permit gates to raise and must sound whistle to reactivate gates and crossing must not be entered until gates are down.

Ostrom: Whistle mikes installed on main track and siding west of crossing MP 134.3, east end of Ostrom.

Eastward trains stopped west of crossing MP 134.3 on main track or siding will permit gates to raise and must sound whistle to reactivate gates. Crossing must not be entered until gates are down.

Yuba City Branch: Stop signs installed east of Franklin Avenue Crossing, MP 148.1. Westward movements must stop at stop sign and allow flashing light signals to operate twenty seconds before entering crossing. Stop signs also installed to govern movements on spur track.

Chico: When westward absolute signal at east end of siding displays stop indication, trains must stop east of 8th St. crossing to avoid blocking fire route.

RULE 104. The normal position of rigid switches at junctions:

Woodland	Knights Landing Branch, for movement from siding to Knights Landing Branch,
Harrington	Colusa Branch, for siding,
Wyo	Hamilton Branch, for siding,
Redding	Matheson Branch, for Silverthorn line,
Chico	Stirling City Branch, for Stirling City Branch.

Rule 221. Red Bluff: is a train order office for trains originating only.

Redding: is a train order office for trains originating and westward trains via Corning only.

MOVEMENT OF TRAINS BY STAFF SYSTEM

RULE S-240. Applies at following location(s):

Territory	Register Location
Colusa Branch:	
Harrington-End of Branch	Harrington
Hamilton Branch:	
Wyo-End of Branch	Wyo
Matheson Branch:	
Redding-Matheson	Redding

RULE D-251. Applies between MP 211.88 Tehama, and MP 214.9 Gerber, on eastward and westward main tracks.

RULE 291. Dunsmuir Yard: Unit for display of flashing yellow installed on mast of westward absolute signals at west end main track and siding, MP 319.61.

RULE 306. The following home signals, equipped with triangular plate displaying the letter "P," have included in their control limits some special protective device. Absolute signals are listed as "P-A."

Eastward	Protection	Westward
P-846	Collision barricade detector, MP 85.3	P-855
P-846	Collision barricade detector, MP 85.4	P-855
P-886	Collision barricade detector, MP 88.7	P-897
P-898	Collision barricade detector, MP 89.7	P-903
P-1182	High water detector, bridge 118.88	P-1197
P-1368	High water detector, bridge 137.1	P-1381
P-1748	High water detector, bridge 176.2	P-1769
P-A	Spring switch west end siding Redding	
P-2388	High water detector, Bridge 239.88	P-2403
P-2720	Fire detector, Pit River Bridge, and Slide detector fences, MP 273.7 and 274.1	P-2743
P-2882	Fire detector, bridge 288.5, and Slide detector fences, MP 295.7 and 296.0	P-A

	Eastward	Protection	Westward
P-A	Slide detector fence, MP 297.3		P-A
P-A	Slide detector fences, MP 300.84 and 301		P-3015
P-3024	Slide detector fence, MP 302.7		P-A
P-3050	Slide detector fence, MP 305.6		P-3061
P-3062	Slide detector fence, MP 306.9		P-3073
P-A	Slide detector fence, MP 310.4		P-3111
P-A	Collision detector, highway underpass, MP 108.2		P-1099
P-A	High water detector, bridge No. 135.0		P-1357
P-A	Spring switch west end siding Marysville		P-A
	Spring switch Yuba City Branch Jct. Switch		P-A
P-1906	High water detector, bridge No. 191.83		P-A

When signals with triangular plate bearing letter "P" display stop indication in connection with collision barricade detectors at MP 85.3, 85.4, 88.7 and 89.7, necessary inspection of collision barricade protectors may be made from engine.

SPRING SWITCHES

RULE 538. Spring switches equipped with facing point locks are located as follows:

Station	Location	Normal Position
Redding	West end siding	Main track
Marysville	West end yard	Main track

Spring switches not equipped with facing point locks are located as follows:

Station	Location	Normal Position
Berg	Yuba City Br. Jct. Switch	For controlled siding.

INTERLOCKING

RULE 606. Davis: Limits extend on eastward and westward main tracks from interlocking signals at MP 75.25 to interlocking signal on signal bridge at MP 75.98 on westward main track, interlocking signals 325 feet west of MP 75.98 on eastward main track and eastward siding, interlocking signal at MP 75.97 on the westward siding and to westward interlocking signal at MP 75.8 on the Gerber line.

Switch machine cranks for hand operating dual control switches are mounted on signal instrument case on south side of track at west end of street underpass on the west end; on instrument case on south side of track opposite P.G.&E. switch on the Sacramento end; and on instrument case between 3rd Street and 4th Street on the Woodland end.

When necessary to hand operate dual control switches, permission must be obtained from the operator.

Instructions for hand operating dual control switches are mounted on cases above switch machine crank holders.

LETTER-TYPE INDICATORS

RULE 705. Indicators located as follows:

Illum. Letter	On Signal	Approaching	Authorizes and requires movement as follows:
M	767	Davis (Tehama Line)	Proceed on main track to interlocking signal at MP 75.80 being governed by signal indication.
S	P-A	Redding, west switch	Enter siding
W	MP 319.9	South 1st St. Crossing, Dunsmuir Yard	West trains on main track or sidings when indication illuminated must stop short of South 1st St. crossing and wait until illumination is extinguished.
S	P-A	Marysville (West switch Marysville)	Enter yard
S	A	Signal west end Berg siding	Enter Yuba City Branch

Berg: Coupled-in-motion track scale at MP 145.47. Westward trains entering siding at Berg may receive an "SC" illuminated letter light, indicating train is to be weighed. Train to be moved through siding to east switch of scale track and lined through scale track. Speed of train when weighing must not exceed 4 MPH. A white speed indicator light located west of scale house is bi-directional, displaying indication both eastward and westward. Light is so set as to give a continuous white aspect for speeds under 4 MPH and will give a flashing white aspect for speeds in excess of 4 MPH. Movement of train over scale should be at a continuous speed of 4 MPH without slack action or stopping.

Reverse movement must not be made over scale while scale is activated. Bi-directional white speed indicator light is illuminated when scale is activated and if necessary to deactivate scale so reverse movement can be made contact CTC dispatcher at Roseville.

CENTRALIZED TRAFFIC CONTROL

RULE 760. Limits extend from eastward absolute signal, MP 106.65 Roseville to westward absolute signal at end of double track Tehama, MP 211.88 and from eastward absolute signal at east end double track, Gerber, to east switch, Dunsmuir.

Roseville: To enter East Valley Line from east leg of wye, at hand operated switch, permission for the movement must first be obtained from the train dispatcher, then line switch and be governed by indication of Signal 1068 and instructions from train dispatcher.

Binney Jct.: Movements across WP, at MP 141.8 are under control of SP train dispatcher. When absolute signals governing movements over crossing display "Stop" indication, member of crew must contact train dispatcher for instructions. If signal cannot be cleared, after ascertaining from indications on control machine that there is no train approaching from either direction on WP, train dispatcher may authorize member of crew to operate "Push Button Time-Release" in accordance with instructions posted in box marked "SP" near crossing.

Operating instructions for push button time release:

Press button until amber light is illuminated, then release.

After time release interval red light should be illuminated, indicating time release has functioned and intersecting route is clear of conflicting train movements.

If absolute signal does not then indicate proceed after time release actuated but red light is illuminated in push button box, train may proceed over intersecting railroad crossing under provisions of Rule 776 without providing flag protection on intersecting route.

If absolute signal does not display proceed indication and red light is not illuminated in push button box after time release actuated, train may proceed only as provided by Rule 663(c) and Rule 776.

Redding: Dwarf type indicator for display of flashing white light located on siding west side of south street. Eastward trains using siding must not pass dwarf type indicator until flashing white light displayed, which will authorize train to proceed on siding to absolute signal.

Indicator for display of illuminated "Wait" located on mast of main track signal 2582 at east switch No. 1 track. When illuminated, requires eastward trains to wait west of South Street.

When held by these indicators, member of train crew must contact train dispatcher by phone and be governed by his instructions.

Telephone for communicating with train dispatcher located at:

Signals 2596, 2597, 2721, 2828, 2829, 2837, 2838, 2868, 2869, 2882 and 2883.

GENERAL REGULATIONS

RULE 825. Instructions for setting hand brakes:

Dunsmuir and Dunsmuir Yard:

- Passenger trains { Two brakes on east end,
Three brakes on west end.
- Freight trains or cuts of
25 cars or less Ten brakes on west end.
- Freight trains or cuts of
26 to 50 cars { Ten brakes on west end,
Five brakes on east end.
- Freight trains or cuts of
over 50 cars { Ten brakes on west end,
Ten brakes on east end.

Employee releasing any of these brakes must apply an equal number to replace them, except when preparing train for departure.

Dunsmuir Yard: Hand brakes will not be applied on freight trains if outgoing crew takes charge of train on arrival unless engine is detached.

Dunsmuir: Hand brakes will not be applied on passenger trains standing at the station unless engine is detached, provided conductor has reached understanding that engineer will remain on engine at all times and control train by use of air brakes.

Portable rail skids are hung on posts at lower end of sidings at:

Central Valley, Gray Rocks, Lakehead, Delta, Lamoine, Gibson, Sims, Conant, Castle Crag and Given Spur, MP 256.1.

When necessary to leave cars on these tracks except Given Spur, permission must first be obtained from train dispatcher.

Refer to Rule 825, All Subdivisions.

RULE 827. DRAGGING AND/OR DERAILED EQUIPMENT DETECTOR AND INDICATOR INSTALLED AT THE FOLLOWING LOCATIONS:

MP	Location
81.8	Merritt
87.8	East of Woodland
220.4	Red Bank
225.7	Glade
251.37	West of Girvan
261.3	West of Silverthorne
267.5	East of Central Valley
279.2	West of Mead
305.5	East of Gibson
108.2	East of Roseville
149.0	East of Berg
163.9	Riceton
180.0	West of Chico
187.7	East of Chico

SPECIAL INSTRUCTIONS—VALLEY SUBDIVISION

HOT BOX DETECTORS

Illum.	On Signal	Approaching	Location of Readout
H	Westward Absolute Signal E.E.	Ostrom	Westward Absolute Signal W.E. Ostrom
W	1356	Rupert Dantoni Jct.	
W	1377	Ostrom	
H	MP 138.03	Dantoni Jct.	MP 139.8 Dantoni Jct.
W	2044	Los Molinos	
H	2045	Vina	Westward Absolute Signal W.E. Vina
W	2071	Vina	
H	MP 208.0	Los Molinos	MP 209.8 Los Molinos
H	2387	Draper	Westward Absolute Signal W.E. Draper
W	2388	Culp	
W	2403	Draper	
H	2418	Culp	Eastward Absolute Signal E.E. Culp

When letter "W" is illuminated, train must stop. Member of train crew must contact train dispatcher before proceeding and be governed by his instructions.

SCANNER SITES:

MP	Type	Direction(s)	Location
92.6	C	Both	At Dufour
120.6	C	Both	At Williams
154.2	C	Both	At Artois
179.7	C	Both	At Corning
240.0	A	Both	Draper-Culp
267.5	C	Both	Central Valley-Gray Rocks
283.2	C	Both	At Lakehead
115.4	D	West	Lincoln
136.4	A	Both	Ostrom-Rupert
163.9	C	Both	Riceton
206.3	A	Both	Vina-Los Molinos

Refer to Rule 827, All Subdivisions.

RULE 827-A. Davis & Dunsmuir: Trains handling cars containing Class A Explosives, Radioactive material, or tank cars containing Acrylonitrile, Anhydrous Ammonia, Chlorine, Hydrofluoric Acid, Poison Gas, or Flammable Gas (FG) must be given a rolling inspection by outbound train crew unless otherwise instructed.

Refer to Rule 827-A, All Subdivisions.

RULE 872. Enginemen taking charge of road engines at Roseville diesel facility will consider engines as having been amply supplied with water, fuel, sand and other supplies.

AIR BRAKE RULES

RULE 2, A. Taking Charge of Engines.

Will apply at:
Roseville.

FREIGHT TRAINS

RULE 17. Retaining valves must be used on descending grades as follows:

Dunsmuir Yard and Delta, Middle Creek and Matheson.

WITHOUT DYNAMIC BRAKE IN OPERATION:

One retaining valve for each 80 tons in train. If gross tonnage exceeds 80 tons per operative brake, retaining valves must be used on all cars and speed must not exceed 15 MPH.

WITH DYNAMIC BRAKE IN OPERATION:

Permissible Tons Per Unit Without Retaining Valves

	Basic Dynamic Brake	Extended Range Dynamic Brake
	Per Axle	Per Axle
With dynamic brake in operation but without pressure maintaining system of braking:		
Dunsmuir Yard and Delta	275	350
Middle Creek and Matheson	135	175
With dynamic brake in operation and with pressure maintaining system of braking:		
Dunsmuir Yard and Delta	500	675
Middle Creek and Matheson	400	475

If permissible tonnage is exceeded, one retaining valve must be used for each 150 tons in excess thereof.

Refer to Air Brake Rule 17, All Subdivisions.

RULE 24. Will apply at Roseville.

RULE 24-G. Will apply at Dunsmuir Yard and Dunsmuir.

RULE 24-E. Will apply to trains arriving Roseville.

RULE 33. Middle Creek and Matheson: Maximum tonnage per operative brake—80 tons; except with dynamic brake and pressure maintaining system of braking in operation; with not more than 20 cars for each six axles of dynamic brake; with speed not exceeding 20 MPH, and with all retaining valves on loaded cars in high pressure position—100 tons.

Insufficient dynamic brake capacity or failure of dynamic brake which results in exceeding these tonnages per axle, is to be considered as operating without dynamic brake.

Should dynamic brake failure occur or partial failure of dynamic braking occur resulting in insufficient dynamic brake capacity, train is to be considered as operating without any dynamic brake. Trains must stop and all retaining valves turned up. Train may then proceed not exceeding 15 MPH if, in the judgment of the conductor and engineer, it is safe to do so.

Restrictive grades are as follows:

Westward	MP	to	MP	MPH
Between Sims and Gibson	307.6		306.3	25

MATHESON BRANCH

Westward	263.0	260.6	20
Eastward	264.1	265.0	20

SPECIAL INSTRUCTIONS—VALLEY SUBDIVISION

EASTWARD			PSGR TRAINS	FRT	WESTWARD			PSGR TRAINS	FRT
MP	MP	Column:	1	2	MP	MP	Column:	1	2
DAVIS to DUNSMUIR:					DUNSMUIR to DAVIS:				
75.6	to	76.0	40	40	322.6	to	295.6		
76.0	to	84.4	60	40	(288.7)			25	25
84.4	to	85.5	40	40	288.7	to	285.9	40	40
85.5	to	149.5	60	40	285.9	to	269.0	45	45
149.5	to	150.0	40	40	269.0	to	261.2	65	55
150.0	to	178.0	60	40	261.2	to	259.7	60	55
178.0	to	178.9	40	40	259.7	to	258.0	45	45
178.9	to	185.9	60	40	258.0	to	247.3	70	55
185.9	to	186.3			247.3	to	247.0	60	55
(Beginning of D.T.)			35	35	247.0	to	243.7	70	55
186.3	to	211.8	25	25	243.7	to	242.5	65	55
211.8	to	223.9	70	55	242.5	to	233.6	70	55
223.9	to	224.4	45	45	233.6	to	226.6	65	55
224.4	to	226.6	60	55	226.6	to	224.4	60	55
226.6	to	233.6	65	55	224.4	to	223.2	45	45
233.6	to	242.5	70	55	223.2	to	214.9	70	55
242.5	to	243.7	65	55	214.9	to	186.3	25	25
243.7	to	247.0	70	55	186.3	to	185.9	35	35
247.0	to	247.3	60	55	185.9	to	178.9	60	40
247.3	to	258.0	70	55	178.9	to	178.0	40	40
258.0	to	259.7	45	45	178.0	to	150.0	60	40
259.7	to	261.2	60	55	150.0	to	149.5	40	40
261.2	to	269.0	65	55	149.5	to	85.5	60	40
269.0	to	285.9	45	45	85.5	to	84.4	40	40
285.9	to	288.7			84.4	to	76.0	60	40
(295.6)			40	40	76.0	to	75.6	40	40
295.6	to	322.57	25	25					

Between Davis and Tehama, Column 1 speeds will apply only to trains consisting entirely of passenger equipment.

Maximum authorized speed for freight trains is 55 MPH, except between MP 214.9 and MP 321.0 trains BRLAT, BROAT, LABRF, LABRT and OABRT are authorized to operate at column 1 speeds not exceeding 60 MPH, provided train contains no restricted cars, or empties except cabooses and does not exceed 80 tons per operative brake and/or 120 cars.

Other trains may be authorized by train order to operate at Column One speeds not exceeding 60 MPH provided they contain no restricted cars, or empties except cabooses, and do not exceed 80 tons per operative brake and/or 120 cars.

Speed on other than main track not to exceed . . . 10 MPH

Exceptions:

On Sidings & Thru Turnouts at:

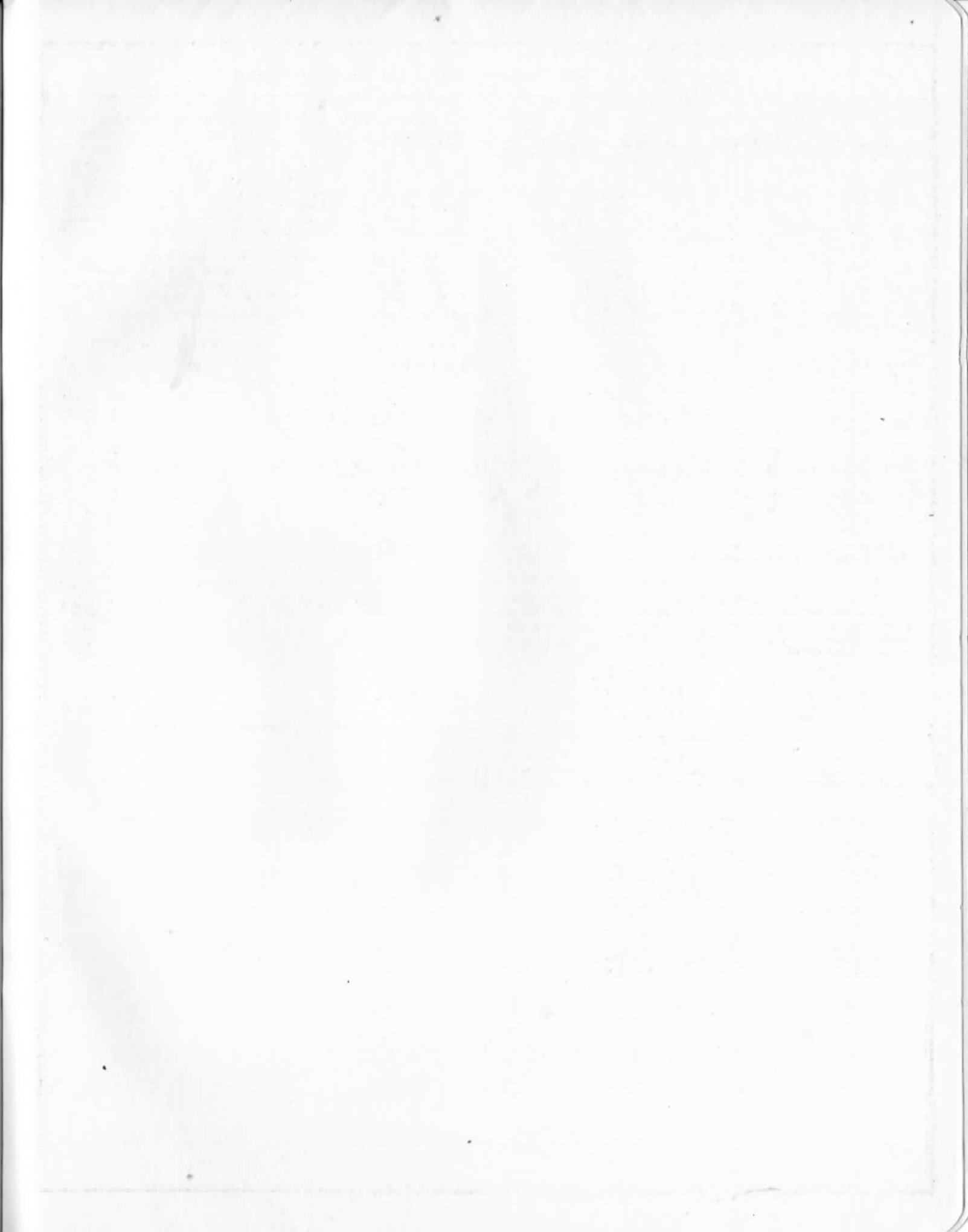
Rawson	25 MPH
Blunt	25 MPH
Culp	25 MPH
Draper	25 MPH
Girvan	20 MPH
Silverthorn	25 MPH
Central Valley	25 MPH
Gray Rocks	25 MPH
Obrien	25 MPH
Mead	25 MPH
Lakehead	25 MPH
Delta	20 MPH
Lamoine	20 MPH
Sims	20 MPH
Conant	20 MPH
Castle Crag	20 MPH
Sunset-Whitney Ranch	25 MPH
Brock	25 MPH
Ostrom	25 MPH
Berg	25 MPH
Fagan	25 MPH
Richvale	25 MPH
Chico	25 MPH
Anita	25 MPH
Vina	25 MPH

Trains with AMTRAK EP630A engines in consist, unless otherwise restricted to a lower speed, must not exceed 50 MPH from point where engine enters curve until engine and first car behind engine are again on tangent track between the following mile post locations:

MP 81.9-MP 82.3	MP 231.9-MP 232.1
MP 85.6-MP 86.1	MP 242.5-MP 242.8
MP 226.2-MP 226.5	MP 260.0-MP 261.1
MP 227.8-MP 228.1	MP 262.1-MP 263.3
MP 230.7-MP 230.9	MP 264.8-MP 268.2

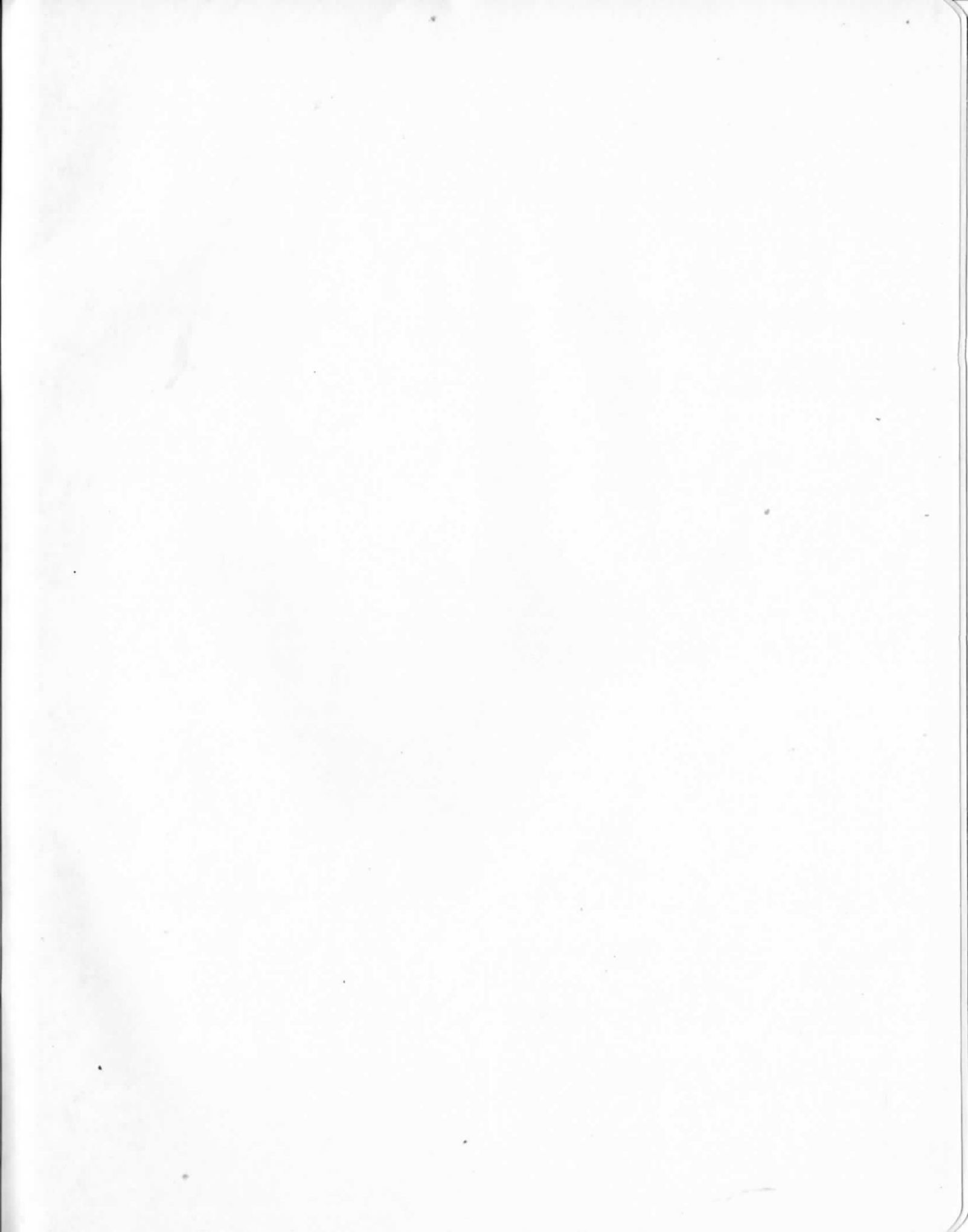
Trains handling cars containing Hazardous Material—Refer to Miscellaneous Item 1, All Subdivisions, and must not exceed 30 MPH between the following mile post locations:

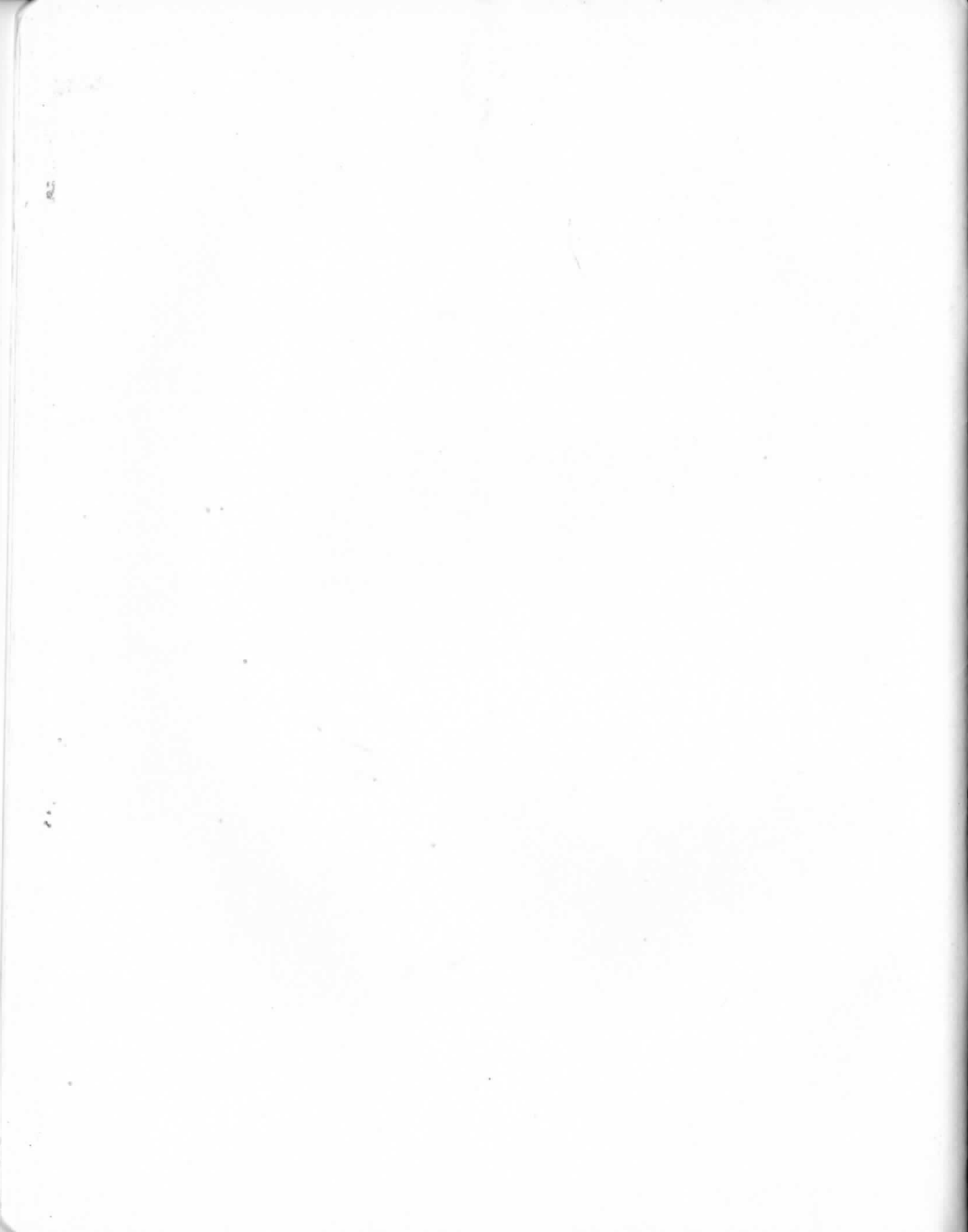
Woodland	MP 84.4 to MP 85.5
Arbuckle	MP 113.1 to MP 113.5
Williams	MP 124.0 to MP 124.3
Willows	MP 149.4 to MP 150.2
Orland	MP 165.3 to MP 165.7
Corning	MP 178.0 to MP 178.9
Red Bluff	MP 223.2 to MP 223.6
Anderson-Redding	MP 246.8 to MP 258.8
Lincoln	MP 116.6 to MP 117.5
Wheatland	MP 127.8 to MP 128.3
Live Oak	MP 151.4 to MP 151.8
Gridley	MP 157.5 to MP 158.2
Biggs	MP 161.2 to MP 161.5

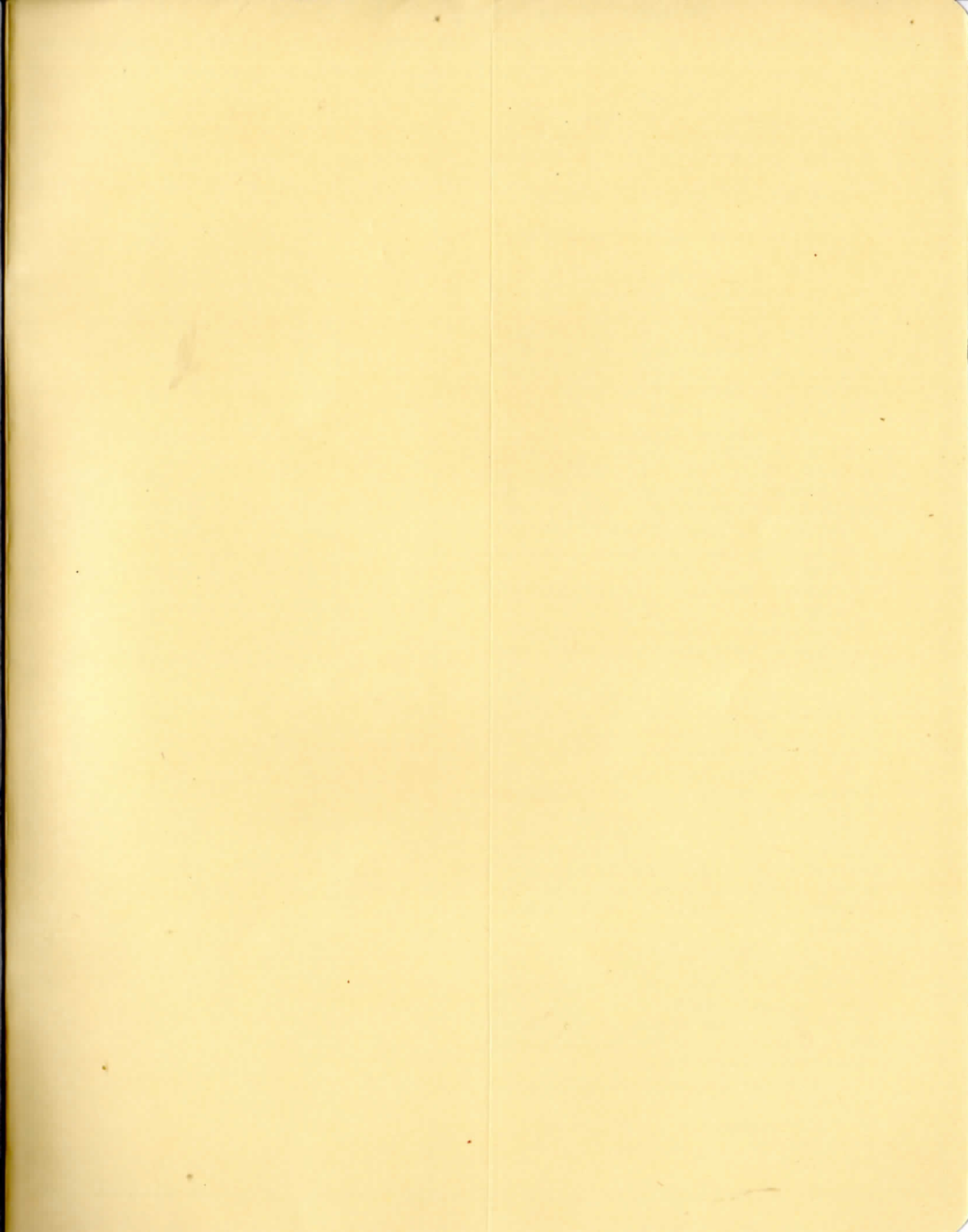


STATE OF NEW YORK

Faint, illegible text, possibly a document or form, with some visible lines and structure.







RULE 10-I

Oral authorization and acknowledgments between Foremen and Engineers for trains to pass "Red Conditional Stop" signs must be worded in the following forms:

"SP FOREMAN AT MP CALLING SP (Train No.)"

(After train answers giving his identification):
(i. e.) SP Train

Foreman's Response

"THIS IS SP FOREMAN . . . IN CHARGE OF THE WORK BETWEEN MP . . . AND MP SP TRAIN ORDER NO. . . . WE ARE IN THE CLEAR AND YOU MAY PROCEED PAST THE RED CONDITIONAL STOP SIGN AND THROUGH THE LIMITS OF ORDER AT MPH, REPEAT MPH"*

Engineer's Response

"THIS IS ENGINEER SP TRAIN I MAY PROCEED PAST THE RED CONDITIONAL STOP SIGN AND THROUGH THE LIMITS OF ORDER NO. . . . BETWEEN MP . . . AND MP . . . AT (Speed). REPEAT (Speed) MILES PER HOUR."

Foreman must acknowledge Engineer's response as follows:

"SP TRAIN ORDER NO. , BETWEEN MP AND MP MPH* OK."

*When no speed restriction account above Form "Y" Train Order, tell train engineer "At Maximum Authorized Speed."

Oral authorization and acknowledgments between Foremen and Engineers for trains to pass "Red Conditional Stop" signs in multiple main track territory must be worded in following forms:

Foreman's Response

"THIS IS SP FOREMAN IN CHARGE OF THE WORK BETWEEN MP AND MP SP TRAIN ORDER NO. . . . WE ARE IN THE CLEAR OF TRACK . . . AND YOU MAY PROCEED PAST THE RED CONDITIONAL STOP SIGN ON TRACK . . . AND THROUGH THE LIMITS OF ORDER AT MPH, REPEAT MPH."

Engineer's Response

"THIS IS ENGINEER SP TRAIN I MAY PROCEED PAST THE RED CONDITIONAL STOP SIGN AND THROUGH THE LIMITS OF ORDER NO. . . . ON TRACK BETWEEN MP AND MP AT (Speed). REPEAT (Speed) MILES PER HOUR."

Foreman must acknowledge Engineer's response as follows:

"SP TRAIN ORDER NO. ON TRACK , BETWEEN MP AND MP MPH OK."

SPEED TABLE

TIME PER MILE	MILES PER HOUR
36"	100
37"	97.3
38"	94.7
39"	92.3
40"	90
41"	87.8
42"	85.7
43"	83.7
44"	81.8
45"	80
46"	78.3
47"	76.6
48"	75
49"	73.5
50"	72
51"	70.6
52"	69.2
53"	67.9
54"	66.7
55"	65.5
56"	64.3
57"	63.2
58"	62.1
59"	61
1'00"	60
1'01"	59
1'02"	58.1
1'03"	57.1
1'04"	56.2
1'05"	55.4
1'06"	54.5
1'07"	53.7
1'08"	52.9
1'09"	52.2
1'10"	51.4
1'11"	50.7
1'12"	50
1'13"	49.3
1'14"	48.6
1'15"	48
1'16"	47.4
1'17"	46.8
1'18"	46.2
1'19"	45.6
1'20"	45
1'25"	42.4
1'30"	40
1'35"	37.9
1'40"	36
1'45"	34.3
1'50"	32.7
1'55"	31.3
2'00"	30
2'15"	26.7
2'30"	24
2'45"	21.8
3'00"	20
3'30"	17.1
4'00"	15
5'00"	12
6'00"	10
7'00"	8.6
7'30"	8
8'00"	7.5
10'00"	6